Social Comparisons and Effort Provision: The Response to Learning One is Less Preferred.*

Diya Abraham†, Ondrej Krcal‡

April 27, 2022

Abstract

We study how agents react to learning that they are less liked or preferred by a principal relative to their peers. In our experiment, we have a principal divide the responsibility for her earnings between two agents based on (irrelevant) personal information about them. We find that agents are less altruistic toward the principal when they perceive an intentional decision to make them less responsible, relative to when the same lower responsibility for the principal's earnings is determined randomly by a computer. Agents perceive a larger subjective component to the principals' decision than principals claim exist, and also report having a stronger emotional reaction to learning about their relative importance when the principal's decision was intentional. Our results suggest that behavior is highly sensitive to the implicit social comparison that can be inferred from the principal's decision, and especially so when this comparison is unfavorable to the agent.

Keywords: social comparison, trust, altruism, effort provision
JEL Classification: M54, J24, C90, D91

DRAFT – PLEASE DO NOT CITE OR CIRCULATE

*We thank audiences at Masaryk University, WU Vienna and the ESA 2021 Global Online Around-the-Clock Meeting. This project received financial support from the WU small projects grant and the Masaryk University Specific Research grant for Ph.D. students.

†Wirtschaftsuniversität Wien, Institute for Markets and Strategy, Austria, e-mail: diya.abraham AT wu.ac.at, and Masaryk University, Lipova 41A, 60200 Brno, Czech Republic.

‡Masaryk University, Lipova 41A, 60200 Brno, Czech Republic, e-mail: ondrej.krcal AT econ.muni.cz

I Introduction

In organizational settings, ill will toward an employer may arise in a number of situations. One potential reason for employees to bear resentment toward their employers might be if they learn that they are less preferred, liked or trusted by their employer relative to their peers. Employees may infer this from high-level decisions that have direct material consequences for them, for instance if they receive a lower bonus than their peers despite achieving the same results. But they could also infer it from actions that do not have direct or immediate material consequences: for example, an authority figure's stereotype about a certain group (e.g. women or minorities) might reveal itself in how she interacts with members of the group and affect how they believe she perceives them relative to those who are *not* in that group (Carlana, 2019; Glover et al., 2017).

We design an experiment to investigate the response of an agent to an inconsequential piece of social comparison information that reveals to the agent that she is less trusted and/or liked by the principal relative to her peers.

While several studies have explored how an employee's reciprocal actions toward an employer might be affected by pay comparison information, there has been less work on employees' behavior in response to pieces of social information that might be psychologically relevant even if materially inconsequential. To our knowledge, our study is the first to systematically investigate this phenomenon.

In Section III, we describe our experimental design. Our paradigm for investigating agents' behavior on learning about a principals' preferences for them, is based loosely on the three-person gift exchange game often employed in laboratory experiments to understand the effect of paying unequal wages (Gächter et al., 2012; Gächter and Thöni, 2010; Nosenzo, 2013). In this game, a "manager" decides what wage to pay two "employees", who can, in turn, reciprocate by choosing to send the manager costly effort points. In experiments utilizing this game, employees often punish the manager by sending a lower number of effort points when they learn the manager assigned them a lower wage than their peers. In our experiment, rather than allocating a high and a low wage to the two employees, the manager reviews the employees' responses to some unrelated personality questions before deciding which of their effort points to assign a high value to, with the other's effort points receiving a lower value. Employees have a fixed store of effort points. Importantly, regardless of whether the manager decides their individual effort points have high or low value *to her*, each effort point is worth the same amount of CZK 0.5/ effort point if the employees choose to keep it for *themselves*. We are thus able to have employees be materially unaffected by the manager's decision but still be in a position to infer from it that they were subjectively assessed by the manager and subsequently entrusted with a greater or lower importance for her payoff (depending on whether

she assigned their effort points the high or low value respectively). In the baseline, a computer randomly determines on the manager's behalf which of the two employee's effort points would be worth the higher (or lower) amount to the manager, thus creating a comparable set of high- and low-importance employees who, unlike those in the treatment, cannot infer anything about the manager's perception of them relative to their peers. In our experimental treatment, the manager thus decides which of the two employees' actions she is willing to become more vulnerable to (/dependent on). We chose to reveal the managers' preferences over the employees in this way because stronger preferences for subordinates in the workplace are often reflected in the willingness of a manager to place greater trust in them or become more vulnerable to them be it through sharing confidential information with them or assigning tasks to them that are crucial for the manager's own reputation.

In Section IV, we report our results. Our main finding is that the employees the manager chose to make less important for her earnings in the treatment provide less effort than those in the baseline who were less important by random chance. We find no corresponding increase in effort from the employees whom the manager chose to make more important for her earnings in the treatment relative to the baseline. Through a (non-incentivized) post-experimental survey, we show that while employees in the treatment believed the manager's decision to be based on how much she liked them or believed them to be similar to herself, managers in the treatment claimed their decisions were based on a more objective assessment of how many effort points they expected each of the two employees to send them. We further observe that employees in the treatment had a significantly stronger emotional response to learning how much their effort points would be worth to the manager compared to those in the baseline. This suggests that despite being inconsequential for the employees, the intentional decision of the manager to become more (or less) vulnerable to their actions was sufficient to garner an emotional response from them. In Section V, we discuss these results and conclude.

II Literature Review

Social comparison is the process of thinking about others in relation to the self (Wood, 1996). The psychological theory of social comparisons, why and how individuals engage in it and how it could affect self-evaluations and behavior dates back to Festinger (1954). A recent meta-analysis of over 60 years of social comparison research finds that when given the choice, people predominantly tend to engage in upward social comparisons (i.e. comparing oneself to someone who appears to be in a better position), and that such comparisons tend to lower mood and decrease self-evaluations, especially if made with proximal others (Gerber et al., 2018). Within an organization, individuals might naturally acquire highly relevant information to evaluate themselves by comparing themselves to their coworkers. However aside from social

comparisons that arise from a natural desire for self-evaluation, organizational settings are also ripe for comparisons that are prompted by a third party's decision or action.

The most common source of such comparisons stems from differences in wages or other financial incentives, both of which are usually the consequence of an intentional decision by an employer or manager. A large body of work has explored how workers perceive such differences in their financial incentives. While some studies have found that workers' effort choices are unaffected by their coworkers' wages (Bartling and Von Siemens, 2011; Charness and Kuhn, 2007), several others document a strong effect of wage comparisons, specifically a negative effect on effort resulting from an upward comparison. Employing a three-person gift-exchange game, Gächter and Thöni (2010) find that disadvantageous wage inequality as a result of a principal's wage allocation decision reduces agents' effort for the principal while advantageous wage inequality does not increase it on average. They also find that when it is a random device acting on behalf of the manager rather than the manager herself who sets unequal wages, the negative effect of disadvantageous wage inequality is reduced significantly suggesting that it is the intention to discriminate (rather than the payoff consequences of said discrimination) that elicits a negative reaction from the lower paid agents. Other lab studies have similarly found that revealing pay comparison information increases the tendency of lower-paid workers to shirk (Greiner et al., 2011) and reduces the amount of effort they will provide (Nosenzo, 2013). John et al. (2014) also find that participants in a disadvantaged position are more likely to cheat when they are aware that close others are earning more. This suggests that an upward comparison may not only reduce the incidence of prosocial behavior but also increase the likelihood of antisocial behaviors.

Data from the field reveals similar results: Cohn et al. (2014) have either both or one of a pair of coworkers' wages cut and find that the upward social comparison prompted by disadvantageous wage inequality lowers effort by twice as much as when both workers had their wages cut. Obloj and Zenger (2017) have bank branches assigned to an advantaged or disadvantaged tournament group reflected in higher or lower financial incentives to compete respectively in order to create impetus for social comparison among branches. They find that the branches assigned to the disadvantaged tournament group lower their productivity and are more likely to do so when the advantaged tournament group is more proximate socially, structurally, or geographically. Ockenfels et al. (2015) study how differences in bonus payments affect workers in a large multinational company and find that these differences lower the satisfaction and performance of workers who received lower bonuses but only when they are aware of their relative standing, and not otherwise.

A recurring result in many of these studies is that lower-paid workers seem to be responding not just to the differences in their incentives but to the information that these incentives reveal

about their comparative position in the firm. Diving deeper into why workers might react to such differences in incentives, Breza et al. (2018) find that it appears to be the arbitrary nature of the decision to assign different incentives that drives these effects. In their experiment, they find that the negative effects of wage inequality on effort provision disappear when wages reflect observable productivity differences.

Comparisons among co-workers need not just be prompted by differences in their material incentives: they could also be prompted by differences in how managers interact with certain workers or in how tasks are allocated among them, both of which have the potential to be perceived by workers as reflecting managers' subjective preferences rather than reflecting an objective decision process. In fact, it has been found that subordinates belonging to a manager's in-group are indeed favored when it comes to allocating desirable tasks or resources to them (Bandiera et al., 2009; Hjort, 2014; Xu, 2018), which suggests there is often not an objective basis for many managerial decisions. Quantifying the consequences of taste-based discrimination on workers' effort provision, Glover et al. (2017) find that minority cashiers at a French grocery store reduce their performance when assigned to managers who are biased toward minorities. Using data collected from a complementary survey, they find that the effect observed does not stem from minority workers perceiving any mistreatment by such managers, but rather is a result of these managers simply being less likely to come over to their cash stations and interact with them. The authors suggest that the cashiers might have reduced their performance as a reaction to the biased managers' low expectations of them, thus creating a self-fulfilling prophecy. This result is more clearly seen in studies that investigate the effect of people having stereotypes about certain groups: Lavy and Sand (2015) show that being assigned to a gender-biased teacher early on has long-run implications for students' occupational choices. Specifically, they find that teachers' overassessment of boys in a specific subject has a significant negative effect on girls' achievements in the national test on that subject administered during middle and high school. Carlana (2019) similarly shows that teacher stereotypes lead to girls underperforming in Math and self-selecting into less demanding high schools. In one small experiment demonstrating the effects of a leader's low expectations on subordinate's behavior, Oz and Eden (1994), either do not tell squad leaders how to interpret a subordinate's score on a physical fitness test (control, n=17) or tell them that the score is *not* indicative of ineptitude (treatment, n=17). They find that low-scoring subordinates assigned to the control did not improve their score by as much as those assigned to the treatment suggesting that the lower expectations of subordinates that were formed by squad leaders in the control did have a negative effect on the subordinates.

In the context of trusting and trustworthy behavior, a trustee's behavior may be affected not only by the expectations of the trustor but also by the trustor's perceived intentions toward her.

Previous studies exploring the link between trustees' behavior and trustors' intentions toward them reveal that intention-sensitive behavior of the trustee can predict positive reciprocity, negative reciprocity or both (Blount, 1995; Falk et al., 2008; McCabe et al., 2003). The results of a meta-analysis by Johnson and Mislin (2011) of 162 replications of the trust game reveals a tendency of the trustee to return more money (as a proportion of the amount received) as the amount sent to her increases, suggesting that greater trust is consistently rewarded with greater trustworthiness. Falk and Kosfeld (2006) find that when a principal limits the choice set of an agent, thereby signaling a distrustful intention, the agent provides less effort for the principal compared to a equivalent situation in which no such intention can be inferred.

Our experiment is designed so that employees would possess a natural reference point or expectation for the extent to which the manager would decide to trust them. Thus if the actual level of the manager's trust was above or below this reference level, they would be able to infer from this whether the manager's subjective evaluation of them was positive or negative. Here, once again the existing evidence would predict a strong reaction to a negative subjective evaluation. Sebald and Walzl (2014) find that agents punish principals when their feedback falls below the agents' own subjective self-evaluations and do so regardless of whether or not such feedback has monetary consequences. Bellemare and Sebald (2019) further show that agents react differently toward a principal's subjective evaluation of them depending on their level of self-confidence. Relatedly, Garcia et al. (2010) find that workers actively attempt to create a comparison context in which they do not have to make upward comparisons and show that such behavior is linked to protecting their self esteem. Drawing from the empirical evidence, Koszegi et al. (2019) suggest a theory of fragile self esteem which when applied to the situation that employees might find themselves in our experiment, would predict that an employee could lash out against against the manager for giving her an unfavorable evaluation (or comparing her unfavorably with another) in an attempt to regain her initial level of self-esteem prior to the decision. Keeping this in mind, we measured both the state and stability of employees' self esteem (using self-report measures created and validated by Heatherton and Polivy (1991) & Altmann and Roth (2018) respectively) to check if the level of low-importance employees' self-esteem measured after they had made their choices might moderate the differences in their effort provision for the manager in the treatment and baseline. We also collected information from employees in both treatment and baseline about how they felt in retrospect on learning about the manager's decision (in the treatment) or the computer's decision (in the baseline) regarding their relative responsibility (or importance) for the manager's earnings.

III Experimental Design and Procedures

III.A Overview of the design and the main hypothesis

In the experiment, firms made up of three subjects (a manager and two employees) are assigned to either a treatment or baseline condition. In the treatment, the manager of each firm compares the two employees of the firm on certain personal characteristics before deciding which of their decisions are going to matter more for her earnings. This decision creates two groups of employees: those whose decisions the manager's earnings are highly dependent on (i.e. the high-importance or high-responsibility employees) and those who are not as relevant for the manager's earnings (i.e. the low-importance or low-responsibility employees). In the baseline, a computer makes this decision about the relative importance of the two employees for the manager's earnings on behalf of the manager. Thus, high- and low-importance employee groups are created in both the treatment and the baseline, with the only difference being the lack of any intentional decision being made by the managers in the baseline. Based on the literature reviewed in the previous section, we formed the following hypothesis:

Hypothesis 1 *Low-importance employees in the treatment provide less effort for the manager than low-importance employees in the baseline.*

We pre-registered the experimental design and the above hypothesis on aspredicted.com.[1]. We analyze the behavior of high-importance employees as well, but since we did not expect to see a large effect of the treatment for these employees, we undertook this analysis on an exploratory basis.

III.B Details of each stage of the experiment

At the beginning of the experiment, all subjects indicated their gender. Based on this, they were divided into same sex firms[2] consisting of one manager and two employees. Subjects then answered four personality questions.[3] Next, the employees completed two stated-effort tasks for the manager of which one was randomly selected for payment at the end of the experiment. These tasks are described below:

[1]The preregistration can be found at http://aspredicted.org/X

[2]Subjects were aware that they were assigned to same sex firms. Our reason for doing so was to ensure that employees did not think the manager made the decision of which of them to trust more based on what the responses to the personality questions *might* have revealed about their gender. Our aim was to rule out the effect of employees reacting to gender-based discrimination on the part of the manager.

[3]Before answering these questions, subjects were told that their responses might be used over the course of the experiment, but they did not receive any other instructions regarding the nature of the interaction in which they would be engaging in over the course of the experiment.

- Task 1: This task measured employees' altruistic preferences toward the manager before they received any treatment-specific information. In this task, each employee was paid a flat fee of CZK 150 and was also endowed with 40 'work-hours'. These work-hours were worth CZK 0.5/work-hour if they chose to keep it for themselves. Alternatively, they could choose to send any integer amount of their 40 work-hours to the manager of the firm who would receive CZK 3/work-hour sent to her. The manager's earnings (in CZK) consisted of the total number of work-hours received from the two employees multiplied by 3. Managers had no decisions to make in Task 1 and the results from Task 1 were only revealed at the end of the experiment.

- Task 2: Task 2 was exactly the same as Task 1 except this time, before Task 2 began, the manager of firms assigned to the treatment decided, *based on the employees' responses to the personality questions asked in the beginning*, how much each of their work-hours would be worth *to her/him* under the condition that the total added up to CZK 6/work-hour for both employees.[4] Unknown to the employees, the manager's choice-set was binary: s/he could either have employee 1's work-hours be worth CZK 5/work-hour to her and employee 2's work hours be worth CZK 1/work-hour to her or vice versa.[5] After learning the manager's decision about how much she valued each of their work-hours, employees once again chose how many work-hours (from 0 to 40) to send the manager and how many to keep for themselves. Note that if kept for themselves, the work-hours would still be worth just CZK 0.5/work-hour regardless of the level of importance assigned. In the baseline, the only difference was that a computer randomly decided, on behalf of the manager, how many CZK (either CZK 5 or CZK 1) one work-hour from would be worth to the manager.

Once all subjects completed Task 2, we asked managers and employees for their first and second order beliefs respectively regarding the number of work-hours managers expected the employees to send them in Task 2 (non-incentivized).[6] We then asked managers in the treatment how they they made their decisions of which employee to become more vulnerable to in Task 2. This included a question on whether the decision was random or based on their responses to

[4]This condition ensured that the net efficiency of employees' work-hours were the same as in both tasks, thus allowing us to compare behavior between Task 1 and Task 2 in addition to between treatment and baseline. The results of this comparison can be found in Appendix C

[5]This means that employees could have potentially believed that the manager could have chosen any split of CZK 6/work-hour including the equal 3-3 split as in Task 1. We did not inform employees about the restriction of the manager's choice set in order to ensure that there was always one low-importance employee in each firm. Employees were not deliberately mislead when communicating the manager's decision. See Appendix D, Screenshot 6 for the precise wording used in the experiment.

[6]Further details of what kind of beliefs these were and an analysis based on subjects' responses to these questions are included in Appendix B.

the personality questions and whether it was based on subjective criteria like how much they liked one of the employees/ how similar they believed one of the employees was to themselves or a more objective reason namely, how many work-hours they believed each employee would send them in Task 2. We also asked managers to rate each of the personality questions on a scale of 1 to 5 depending on how relevant the employees' responses to that question were in influencing their decision in Task 2 (where 1 = not at all relevant, 5 = very relevant). We asked employees assigned to the treatment the same questions, but framing them in terms of how they believed the manager of their firm made their decision in Task 2. Next, all participants answered a short questionnaire assessing state self-esteem (Heatherton and Polivy, 1991) and stability of self-esteem (Altmann and Roth, 2018) and this was followed by a short demographic questionnaire.

III.C Description and significance of personality questions

The personality questions that all subjects answered at the beginning of the experiment are listed below:

1. Have you often **lied** for personal benefit in the heat of the moment (1 = yes, 0 = no)
2. If you had to choose, which do you think is more important in a **discussion** (1 = being honest, 0 = making people feel comfortable)
3. How do you like to **travel** (1 = I like to plan ahead, 0 = I prefer to be spontaneous)
4. Do you mind being the center of **attention** (1 = yes, 0 = no)

The inclusion of the personality questions was intended to bring our experimental setting closer to that of an organization in which managers possess some level of personal information about employees. Moreover, we believe that without having the managers in the treatment base their decision on some information about the employees, there would be little impetus for employees, on learning this decision, to believe they were compared by the manager. These specific questions were carefully chosen after a small pilot to ensure they were both uncorrelated with altruism and believed by employees as relevant in influencing the managers' decision. Potential selection issues might have affected our results had managers been able to accurately predict employees' levels of altruism from their responses to these questions. In Appendix A, we show that this is not the case by checking for balance between treatment and baseline and for correlations between the responses to these questions and employees' altruism as measured in Task 1.

III.D Experimental procedures

Our experiment was conducted in November and December 2020 with the subject pool signed up for economic experiments at the Masaryk University Experimental Economics Laboratory (MUEEL) in Brno, Czech Republic. Subjects consisted mainly of students and were recruited using hroot (Bock et al., 2014). Since the physical laboratory was closed due to the COVID-19 pandemic, the experiment was implemented online with live interaction using z-Tree Unleashed (Duch et al., 2020). In order to simulate "lab-like" conditions and ensure subjects stayed active throughout the experiment, we conducted all experimental sessions via a Zoom call, to which all subjects were required to stay connected till the end of the experiment. While checking subjects in, we asked each of them to briefly turn on their video to make sure they were in a quiet location without outside distractions. Participants were first directed to a virtual waiting room where they were instructed to turn off their video and mic. While in the waiting room and during the experiment as well, we ensured that participants could not see each other nor communicate with one another via chat. If they had a question at any point, they could address it to the experimenter directly via Zoom's private chat feature.

We conducted 29 virtual experimental sessions in November and December 2020, collecting data from a total of 453 subjects[7] (151 managers and 302 employees). We had 77 observations each for the high- and low-importance employees in the treatment and 74 observations each for the high- and low-importance employees in the baseline. The average earnings were CZK 151.9 (approx. EUR 5.9) and the experiment lasted for about 20 minutes.[8] The employees had a mean age of 23 years, 50.3% were female, and 44% studied at the Faculty of Economics and Administration at Masaryk University.

IV Results

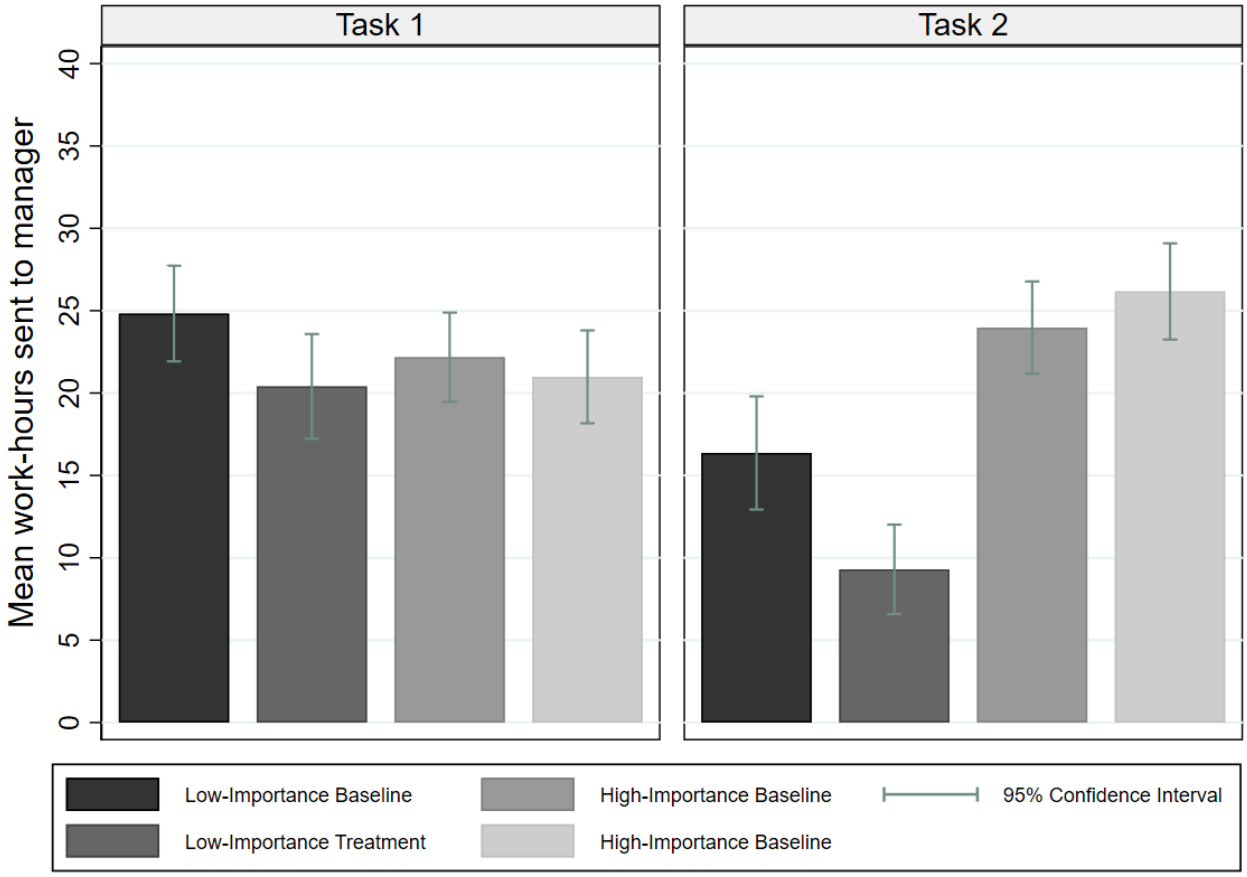
Before diving into the results, we first conducted a randomization check to ensure that there were no significant differences between treatment and baseline for either the low or high importance employees on various demographic characteristics including the personality questions answered in the beginning. The balance table and related analysis can be found in the Appendix A. We find no indication that there is any imbalance between treatment and baseline on the basis of the observed characteristics.

Figure 1 displays the aggregate results across employee groups of work-hours sent to the manager in the treatment and baseline for Task 1 (left) and Task 2 (right). Even though

[7]We initially had 456 subjects but the data from one firm (or 3 subjects) in the baseline had to be dropped because of technical issues.

[8]In PPP, 1 EUR in the Czech Republic is equivalent to 1.45 EUR in Germany as a reference Euro country and so the average payment per hour was approx. EUR 25.6, well above the mean hourly wage

FIGURE 1: Work-hours sent in task 1 and task 2



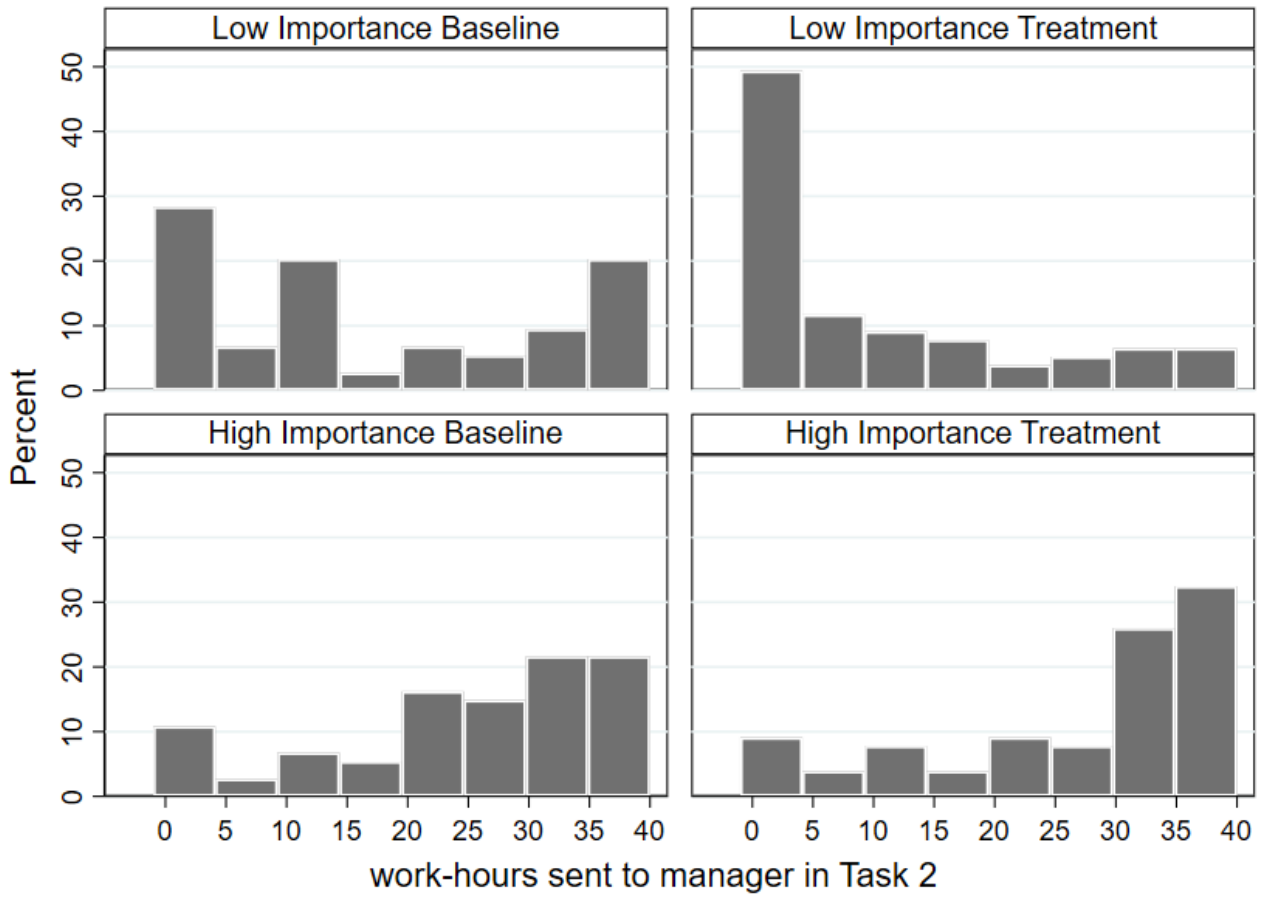
standard economic theory would predict no transfers would be made in either task, employees send an average of 22.07 and 18.93 work-hours to the manager in Task 1 and Task 2 respectively.

Figure 2 shows that when employees know that the manager made an intentional decision about their importance, the distribution shifts significantly leftward for low-importance employees, with a higher proportion of these subjects choosing the minimum transfer of zero. For high-importance employees, the distribution shifts rightward (i.e. toward the maximum transfer of 40) but the shift does not appear as pronounced.

In order to study the effect of managers' decisions on employee behavior in Task 2, we run separate OLS regressions for high and low-importance employees with the dependent variable being the number of work-hours sent to the manager in Task 2. We control for employees' altruism by including the number of work-hours sent to the manager in Task 1, and run further robustness checks that include controls for various demographics and the responses to the four personality questions.[9] In the final model for each set of employees, we include the level and

[9]In the Appendix, we also include, as a further robustness check, results from Tobit regressions that take

FIGURE 2: Work-hours sent in task 2 by treatment



stability of individual self-esteem as measured in our post-experimental questionnaire.

IV.A Effect of the treatment on low-importance employees

Table 1 reports the results from our OLS regressions for low-importance employees. After controlling for altruism (measured by work-hours sent in Task 1), we find a significant negative effect of the treatment on work-hours sent in Task 2. These results are robust to including controls for subject demographics and responses to the personality questions (see Model (2) in Table 1).[10] Thus Hypothesis 1 is confirmed.

Result 1: The intentional decision of the manager has a negative impact on the altruism of employees who were assigned the lower level of importance

The variables capturing the state (i.e. level) and stability of subjects' self-esteem do not explain the number of work-hours sent to the manager (see Model (3) in Table 1) and also do not differ significantly between treatment and control. We return to what might have driven the behavior of the low-importance employees when we investigate the role of beliefs and emotions in Section IV.F.

IV.B Effect of the treatment on high-importance employees

Table 2 reports the results from our OLS regressions for high-importance employees. Controlling for altruism, we find a marginally significant positive effect of the treatment on the number of work-hours transferred in Task 2. However, this effect does not survive robustness checks (see Model (2) in Table 2). Among the high-importance employees, those who answered 'yes' to the question, 'Have you often lied for personal benefit in the heat of the moment?' send fewer work-hours to the manager. However, we note that this effect is driven by relatively few observations and is not stable. There is once again no significant effect of state or stability of employees' self-esteem.

Result 2: The intentional nature of the manager's decision does not have a strong positive impact on the altruism of employees assigned the higher level of importance.

---

into account the relatively large number of observations at 0 and 40.

[10] Of the controls included, the only significant predictor of work-hours sent in Task 2 was the response to the personality question about attention. Subjects who reported that they did mind being the center of attention sent fewer work-hours to the manager. We did not have a prior hypothesis about this effect and hence do not offer an interpretation.

TABLE 1: OLS MODELS OF WORK-HOURS SENT BY LOW-IMPORTANCE EMPLOYEES IN TASK 2

	Dependent variable: work-hours sent in Task 2		
	(1)	(2)	(3)
Treatment	-5.421**	-5.848***	-6.022***
	(2.094)	(2.180)	(2.195)
Work-hours sent in Task 1	0.372***	0.366***	0.367***
	(0.077)	(0.080)	(0.081)
Attention(q4)		-4.682**	-4.966**
		(2.136)	(2.165)
State Self-Esteem			0.149
			(0.236)
Stability of Self-Esteem			0.277
			(0.531)
Control Variables	×	✓	✓
Constant	7.126***	18.140	12.310
	(2.418)	(12.210)	(13.790)
N	151	151	151
R^2	0.191	0.244	0.250

Notes: Standard errors in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively. The control variables in Models (2) and (3) include both the demographic controls: gender, age, employment status, nationality and field of study as well as dummy variables that encode responses to the remaining personality questions namely, Lied (q1), Discussion(q2) and Travel(q3). None of these controls were statistically significant.

TABLE 2: OLS MODELS OF WORK-HOURS SENT BY HIGH-IMPORTANCE EMPLOYEES IN TASK 2

	Dependent variable: work-hours sent in Task 2		
	(1)	(2)	(3)
Treatment	2.913*	2.343	2.118
	(1.681)	(1.743)	(1.761)
Work-hours sent in Task 1	0.603***	0.602***	0.600***
	(0.069)	(0.073)	(0.074)
Lied(q1)		-3.887**	-4.097
		(1.919)	(1.934)
State Self-Esteem			-0.192
			(0.175)
Stability of Self-Esteem			0.112
			(0.461)
Control Variables	×	✓	✓
Constant	10.600***	10.330	11.800
	(1.947)	(8.312)	(9.795)
N	151	151	151
R^2	0.344	0.384	0.389

Notes: Standard errors in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively. The control variables in Models (2) and (3) include both the demographic controls: gender, age, employment status, nationality and field of study as well as dummy variables that encode responses to the remaining personality questions namely, Discussion(q2), Travel(q3) and Attention(q4). None of these controls were statistically significant.

IV.C Overall effect of the treatment on employee altruism and manager earnings in Task 2

In order to understand the net effect of the intentional vs. unintentional distribution of responsibility for the manager's payoff on the behavior of both employees of the firm, we compare the total work-hours received by the managers in Task 2 in the treatment and baseline. We find that while the treatment had a negative effect on transfers on average, this effect is not significant (Mann-Whitney, $p = 0.149$). This result makes sense if we take into account that there was a small positive effect of the treatment on the high-importance employees. Albeit only marginally significant, this positive effect would reduce the size of the net negative effect of the treatment, thereby increasing the sample size required to detect it. We also find no significant difference in managers' earnings in Task 2 between baseline and treatment firms (Mann-Whitney, $p = 0.473$).

Result 3: There is no significant effect of an intentional responsibility-allocation decision on the sum of work-hours received by the managers nor on the earnings of the managers in Task 2.

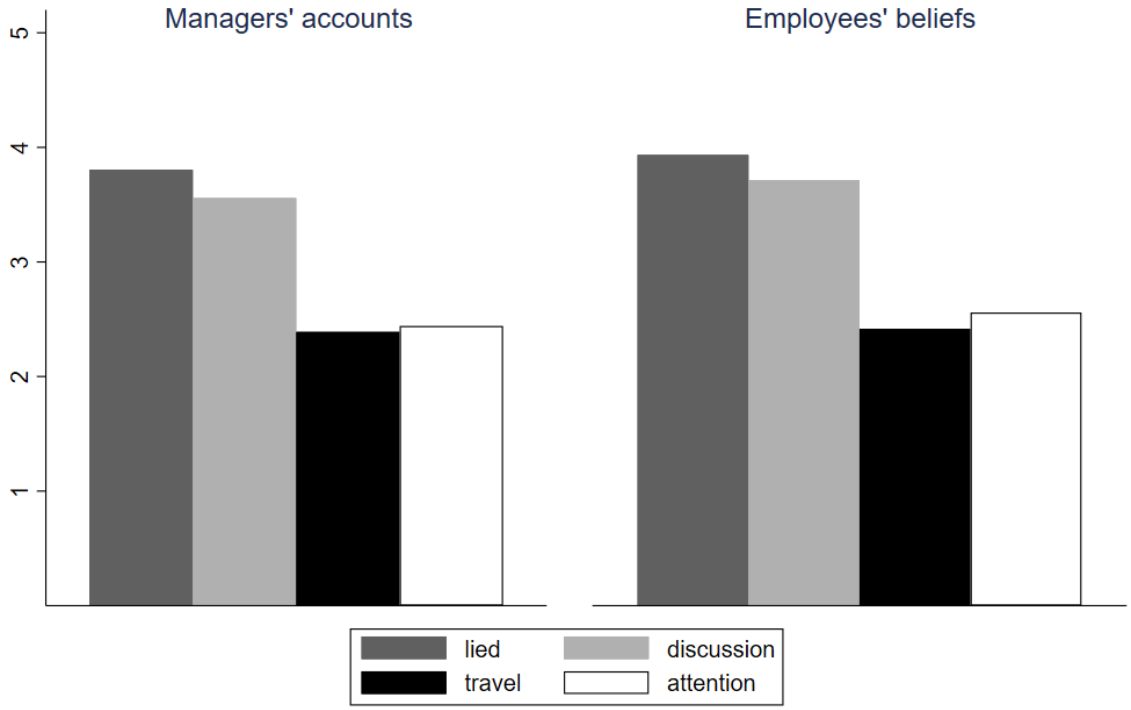
IV.D Perceptions of what drove managers' decisions in the treatment

In the post experimental questionnaire, we asked employees' and managers in the treatment whether the manager's (or in the manager's case, their own) decision of which employee to have her earnings be more dependent on was random or based on the employees' responses to the personality questions. 86% of managers in the treatment claimed their decision in Task 2 was based on the employees' responses. Correspondingly, 72% of the employees in the treatment also believed that the manager's decision was based on their responses. Figure 3 also displays aggregated results for how managers and employees in the treatment rated the relevance of the different personality questions (on a scale from 1 = "not at all relevant" to 5 = "very relevant") in driving the manager's (or in the manager's case, their own) decision about which employee's choices to become more vulnerable to in Task 2. The lack of significant differences in managers' (left panel of Figure 3) and employees' (right panel of Figure 3) responses suggests that employees had very accurate beliefs on average about which questions influenced the managers' decisions.[11]

Employees and managers in the treatment were also asked which of three factors influenced the manager's (or in the manager's case, their own) decision of which employee to have her earnings more dependent on in Task 2. These factors were 1) how *similar* the manager thought

[11]The mean ratings of high and low-importance employees were aggregated here because they were not significantly different.

FIGURE 3: Mean ratings of the relevance of personality questions for the manager's decisions



Notes: Bars show the mean ratings of the relevance of the each of the four personality questions for the manager's decision in Task 2 as reported by managers themselves (left) and as believed by employees (right).

FIGURE 4: Factors driving managers' decisions in Task 2

Notes: Bars show the proportion of managers (left) and employees (right) who chose a specific option (similarity, liking, hours expected) as one of the factors that they/ managers based their decision on in Task 2.

the employees was to them, 2) how much the manager *liked* one of the employees, and 3) how many work-hours they believed the employee would send them. Figure 4 displays the proportion of times each of the three factors was chosen by managers and employees in the treatment.[12] We find that while over 50% of managers in treatment firms reported basing their decision, at least in part, on the relatively objective criteria of how many work-hours they believed the employees would send them, less than 10% of employees in treatment firms believed this to be one of the reasons and over 70% reported that they believed that the manager's decision was based, at least in part, on one (or both) of the two subjective criteria, namely how similar the manager thought one of them was to her and how much the manager liked one of them.

Result 4: Employees in firms where managers made an intentional decision believed there was a larger subjective component to the manager's decision than managers claimed actually existed.

In order to understand whether managers' decisions in treatment firms *were* based on similarity to the two employees, we estimated Probit models of the importance the manager assigned to a given employee in treatment firms (1 = high importance) on four dummies, each of which took the value 1 if the employee answered a given personality question (q1, q2, q3 and q4) in the same way as the manager in their firm.

Table 3 reports the results of these Probit models. We find that the question about 'behavior in a discussion' is marginally significant when it is the sole explanatory variable as well as when it is included along with the other personality variables. However, since this is weak evidence at best, we do not believe we can infer from this that managers' behaved differently than they report in the questionnaire.

IV.E Managers' predictions about employees' behavior

We now examine to what extent managers in the treatment and baseline are able to predict the behavior of the employees in their firm. If we find their predictions are accurate, we can infer that if given the choice, many managers would in fact refrain from making the choice themselves and opt to use a random mechanism instead. To measure their expectations, managers in both treatments were asked the following question before they saw the results from Task 2: "Please state below how many work hours you believe each employee in your firm will transfer to you in Task 2 (Note each employee can transfer between 0 and 40 work hours to you)."[13] Table 4 reports the average of managers' expectations and the average actual work-hours transferred

[12]For this question, unless the 'none of these' option was selected, it was possible to choose more than one option.

[13]Beliefs were not paid

TABLE 3: PROBIT MODELS OF IMPORTANCE ASSIGNED BY THE MANAGER (1 = HIGH)

	Dependent variable: Importance Assigned (1 = High)				
	(1)	(2)	(3)	(4)	(5)
lied(q1)	0.104				0.086
	(0.203)				(0.206)
discussion(q2)		0.158*			0.156*
		(0.205)			(0.208)
travel(q3)			0.013		0.020
			(0.204)		(0.208)
attention(q4)				-0.039	-0.058
				(0.202)	(0.208)
N	154	154	154	154	154
R^2	0.008	0.018	0.000	0.001	0.026

Notes: We report marginal effects with standard errors reported in the parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

by the employees. In most cases, despite aggregate expectations of managers being higher than actual transfers, their predictions are not too far from the reality. The exception is managers' expectations about the low-importance employees in the treatment: the difference in this case is more stark than for other groups with managers' average expectations being over 6 units higher than the actual average transfer (expectations: 16.000; actual: 9.299, Mann-Whitney, p=0.000).

Result 5: Managers in general have optimistic expectations about the transfers they will receive but their expectations deviate the most from reality in the case of employees assigned low-importance in treatment firms where managers made an intentional decision about responsibility allocation.

This suggests that managers who make an intentional decision about responsibility allocation substantially underestimate the negative impact of this decision on the effort choices of the employees to whom they assigned lower responsibility.

IV.F What drives employees' responses?

We have established that that the intentional nature of the manager's responsibility allocation decision has an adverse effect on the effort provision of employees assigned lower responsibility for the manager's payoff. We now explore what drives this response. To do so, we first examine whether employees' beliefs about manager's expectations play a role in how they select how

TABLE 4: Beliefs of managers and employees about Task 2 transfers (x)

	Low Importance Employees			High Importance Employees		
	(1) Baseline	(2) Treatment	(3) Difference (1) - (2)	(4) Baseline	(5) Treatment	(6) Difference (4) - (5)
Managers' expectations of x	19.851	16.000	3.851** (0.027)	23.068	24.532	-1.465 (0.434)
Average x actually chosen	16.365	9.299	7.066** (0.002)	23.973	26.169	-2.196 (0.117)
Are managers' expectations "correct"?	NO	NO	-	YES	NO	-
Employees' beliefs about managers' expectations	18.284	11.481	6.803** (0.000)	24.108	27.273	-3.165* (0.067)
Are employees' expectations "correct"?	YES	NO	-	YES	YES	-

Notes: Numbers in parentheses in columns 3 and 5 correspond to p-values from Mann-Whitney tests. *, **, *** indicate significance at the 10%, 5% and 1% levels respectively. Managers' expectations are "correct" if the Mann-Whitney test does not reject the hypothesis that the average x actually chosen and the expectations of managers about that x are the same ($p > 0.1$). Employees' beliefs are "correct" if the Mann-Whitney test does not reject the hypothesis that managers' expectations and employees' beliefs about those expectations are the same ($p > 0.1$).

many work-hours to transfer to them. We also analyze employees' responses to a free-form question in which we ask them to describe how they felt when they learnt how much their work-hours would be worth to the manager.

1. *Employees' beliefs about managers' expectations:* Immediately after employees made their choice in Task 2, we asked them the following question: "What do you think are the expectations of the manager concerning the number of work hours you would transfer to her/ him in Task 2?".[14] From the first row of Table 4 we see that compared to managers in the baseline, managers in the treatment expected 3.85 fewer work hours from the low-importance employees (Mann-Whitney, p=0.027). From the fourth row of Table 4, we find that low-importance employees anticipate these expectations to some extent: those in the baseline believed managers expected to receive 18.284 work-hours from them while those in the treatment believed it to be 11.481 hours.

   According to the theory of guilt aversion Battigalli and Dufwenberg (2007), it may be possible to infer from this that the reason low-importance employees sent fewer work-hours in the treatment was because they believed managers *expected* fewer work-hours from them and therefore felt less "guilty" about not sending more. Of course, they may have also believed that managers' expectations of them were low because the managers' distrusted them (relative to the other employee in the firm) and they might have sent fewer work hours as a reaction to this distrust. To check whether their beliefs affected their behavior, we ran a linear regression of employees' transfers in Task 2 on their beliefs about the managers' expectations, controlling for their level of importance and altruism as measured by their Task 1 transfers. We find that that the choice of transfer is positively correlated with their beliefs (coeff = 0.480, p=0.000) thus showing that the lower the employees' beliefs about managers' expectations of them, the lower is the amount of work-hours they are willing to send the managers. We are careful not to over-interpret this finding: these beliefs were not incentivized and were reported after the actual choice of transfer had been made, which might have lead subjects to simply report beliefs that were consistent with their choices.

   We also find that, with the exception of low-importance employees in the treatment, the average beliefs of employees about managers' expectations are very accurate on average across conditions. Low-importance employees in the treatment report that they believed managers expected 11.481 work hours from them but the actual expectation of managers was significantly higher at 16.000 work-hours (Mann-Whitney, p=0.000). This is also in line with the finding that managers' expectations of the actual transfers were also the

[14] These beliefs were not incentivized.

most *over*estimated for this group (see Result 5).

2. *Employees' emotional response to the manager's decision:* To further investigate how employees' perceived a deliberate decision by the manager, we asked employees in both treatment and baseline firms the following question: "Please state briefly, how did you feel on seeing how many CZK your work-hours would be worth to the manager?" This question was asked at the very end of the experiment and responses were recorded in free-form. We had three research assistants blind to treatment conditions rate the valence and intensity of emotions that were present in these responses on a scale of -3 to +3, with -3 the highest degree of negative emotional content, +3 indicating increasing the highest degree of positive emotional content in the response, and 0 indicating that the response was neutral or descriptive (i.e. absent any emotional content). We find that low-importance employees in the treatment have significantly stronger negative emotional reactions to learning about their level of importance relative to those in the baseline (mean ratings scores of -1.160 and -0.320 respectively, Mann-Whitney, p=0.000), while high-importance employees have a stronger positive emotional reaction to learning about their level of importance relative to those in the baseline (mean ratings scores of 1.029 and -0.029 respectively, Mann-Whitney, p=0.000). To check whether these recalled emotional reactions may have affected behavior in the experiment, we ran a linear regression of employees' transfers in Task 2 on the emotional rating assigned to their responses, controlling for the employees' assigned level of importance. We find that that the choice of transfer is weakly positively correlated with the rating score (coeff = 1.538, p=0.087) suggesting that the emotional reaction on learning how much their work-hours would be worth to the manager might have influenced their actual transfers, with positive reactions correlated with higher transfers and negative reactions with lower transfers.

   We also observe that among those low-importance employees whose altruism *dropped* from Task 1 to Task 2, the proportion of responses in the treatment that received a negative emotion rating was close to double that in the baseline (49% vs. 27%), suggesting that the *drop* further providing suggestive evidence that negative emotions might have driven the main treatment effect we observe.

Overall, these findings suggest that the decision of the managers did matter to employees. Specifically, for those assigned lower importance, it lowered what they thought the managers expected from them and also generated a negative emotional response, both of which appear to have played a role in their subsequent behavior toward the manager.

V Conclusion

We conducted a lab experiment to investigate how agents react to learning that they are less preferred by a principal for a specific task. We find that agents who believe they are less liked and subsequently less trusted by their principal exhibit a lower degree of altruism toward the principal compared to those with identical incentives but who are unable to infer anything about the preferences of the principal (or her level of trust in them). Our design is unique in that it allows us to rule out the possibility that the behavior we observe is driven by any material reciprocity concerns of agents. Based on previous work, we predicted that the negative effect on the altruistic behavior of less-trusted agents might be driven by intention-based negative reciprocity toward the principal who dealt a blow to their self-esteem by revealing his preference. While the measures of state and stability of self-esteem collected do not lend themselves to this explanation, we do find evidence that the less-trusted employees' beliefs that their managers had lower expectations of them as well as their emotional perception of how they were treated by the manager both may have played a role in their subsequent response.

Our results fit well into existing literature on the effect of social-comparisons in firms which shows that revealing information that allows one to infer they are in a worse position than their peers is detrimental to productivity (Burchett and Willoughby, 2004), satisfaction at work (Card et al., 2012; Ockenfels et al., 2015), and general emotional well-being (Verduyn et al., 2020). We contribute to this body of work by quantifying the psychological effect on an employee of a materially inconsequential decision that nonetheless signals to her that she has been unfavorably compared to another and subsequently entrusted with lower responsibility.

Our experiment also underscores the effect of favoritism in firms, the costs of which tend to be difficult to measure in the field. Favoritism might not be intentional: managers/ employers might treat some employees differently based on their informal or subjective assessments of them and believe their behavior to be inconsequential just because it is *materially* inconsequential for employees. But in some cases, the biases they come to hold based on these assessments might manifest in ways that are salient to employees: for e.g. employees might pay attention to how a manager interacts with them relative to their peers, or allocates tasks among them/ confers public recognition on them, because it helps them to glean information about their social standing in the firm relative to their peers. Our results indicate that while there is not likely to be a strong positive impact on employees who realize they are favored, those who realize they are less preferred might react by lowering the amount of effort they provide for the firm, thus reducing the net outcome.

References

Altmann, T. and Roth, M. (2018). The self-esteem stability scale (sess) for cross-sectional direct assessment of self-esteem stability. *Frontiers in psychology*, 9:91.

Bandiera, O., Barankay, I., and Rasul, I. (2009). Social connections and incentives in the workplace: Evidence from personnel data. *Econometrica*, 77(4):1047–1094.

Bartling, B. and Von Siemens, F. A. (2011). Wage inequality and team production: An experimental analysis. *Journal of Economic Psychology*, 32(1):1–16.

Battigalli, P. and Dufwenberg, M. (2007). Guilt in games. *American Economic Review*, 97(2):170–176.

Bellemare, C. and Sebald, A. (2019). Self-confidence and reactions to subjective performance evaluations.

Blount, S. (1995). When social outcomes aren t fair: The effect of causal attributions on preferences. *Organizational behavior and human decision processes*, 63(2):131–144.

Bock, O., Baetge, I., and Nicklisch, A. (2014). hroot: Hamburg registration and organization online tool. *European Economic Review*, 71:117–120.

Breza, E., Kaur, S., and Shamdasani, Y. (2018). The morale effects of pay inequality. *The Quarterly Journal of Economics*, 133(2):611–663.

Burchett, R. and Willoughby, J. (2004). Work productivity when knowledge of different reward systems varies: Report from an economic experiment. *Journal of Economic Psychology*, 25(5):591–600.

Card, D., Mas, A., Moretti, E., and Saez, E. (2012). Inequality at work: The effect of peer salaries on job satisfaction. *American Economic Review*, 102(6):2981–3003.

Carlana, M. (2019). Implicit stereotypes: Evidence from teachers' gender bias. *The Quarterly Journal of Economics*, 134(3):1163–1224.

Charness, G. and Kuhn, P. (2007). Does pay inequality affect worker effort? experimental evidence. *Journal of Labor Economics*, 25(4):693–723.

Cohn, A., Fehr, E., Herrmann, B., and Schneider, F. (2014). Social comparison and effort provision: Evidence from a field experiment. *Journal of the European Economic Association*, 12(4):877–898.

Duch, M. L., Grossmann, M. R., and Lauer, T. (2020). z-tree unleashed: A novel client-integrating architecture for conducting z-tree experiments over the internet. *Journal of Behavioral and Experimental Finance*, 28:100400.

Falk, A., Fehr, E., and Fischbacher, U. (2008). Testing theories of fairness—intentions matter. *Games and Economic Behavior*, 62(1):287–303.

Falk, A. and Kosfeld, M. (2006). The hidden costs of control. *American Economic Review*, 96(5):1611–1630.

Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7(2):117–140.

Gächter, S., Nosenzo, D., and Sefton, M. (2012). The impact of social comparisons on reciprocity. *The Scandinavian Journal of Economics*, 114(4):1346–1367.

Gächter, S. and Thöni, C. (2010). Social comparison and performance: Experimental evidence on the fair wage–effort hypothesis. *Journal of Economic Behavior & Organization*, 76(3):531–543.

Garcia, S. M., Song, H., and Tesser, A. (2010). Tainted recommendations: The social comparison bias. *Organizational Behavior and Human Decision Processes*, 113(2):97–101.

Gerber, J. P., Wheeler, L., and Suls, J. (2018). A social comparison theory meta-analysis 60+ years on. *Psychological Bulletin*, 144(2):177.

Glover, D., Pallais, A., and Pariente, W. (2017). Discrimination as a self-fulfilling prophecy: Evidence from french grocery stores. *The Quarterly Journal of Economics*, 132(3):1219–1260.

Greiner, B., Ockenfels, A., and Werner, P. (2011). Wage transparency and performance: A real-effort experiment. *Economics Letters*, 111(3):236–238.

Heatherton, T. F. and Polivy, J. (1991). Development and validation of a scale for measuring state self-esteem. *Journal of Personality and Social psychology*, 60(6):895.

Hjort, J. (2014). Ethnic divisions and production in firms. *The Quarterly Journal of Economics*, 129(4):1899–1946.

Holm, S. (1979). A simple sequentially rejective multiple test procedure. *Scandinavian Journal of Statistics*, pages 65–70.

John, L. K., Loewenstein, G., and Rick, S. I. (2014). Cheating more for less: Upward social comparisons motivate the poorly compensated to cheat. *Organizational Behavior and Human Decision Processes*, 123(2):101–109.

Johnson, N. D. and Mislin, A. A. (2011). Trust games: A meta-analysis. *Journal of Economic Psychology*,

32(5):865–889.

Koszegi, B., Loewenstein, G., and Murooka, T. (2019). Fragile self-esteem. *Available at SSRN 3412006*.

Lavy, V. and Sand, E. (2015). On the origins of gender human capital gaps: Short and long term consequences of teachers' stereotypical biases. Technical report, National Bureau of Economic Research.

McCabe, K. A., Rigdon, M. L., and Smith, V. L. (2003). Positive reciprocity and intentions in trust games. *Journal of Economic Behavior & Organization*, 52(2):267–275.

Nosenzo, D. (2013). Pay secrecy and effort provision. *Economic Inquiry*, 51(3):1779–1794.

Obloj, T. and Zenger, T. (2017). Organization design, proximity, and productivity responses to upward social comparison. *Organization Science*, 28(1):1–18.

Ockenfels, A., Sliwka, D., and Werner, P. (2015). Bonus payments and reference point violations. *Management Science*, 61(7):1496–1513.

Oz, S. and Eden, D. (1994). Restraining the golem: Boosting performance by changing the interpretation of low scores. *Journal of Applied Psychology*, 79(5):744.

Sebald, A. and Walzl, M. (2014). Subjective performance evaluations and reciprocity in principal–agent relations. *The Scandinavian Journal of Economics*, 116(2):570–590.

Verduyn, P., Gugushvili, N., Massar, K., Täht, K., and Kross, E. (2020). Social comparison on social networking sites. *Current Opinion in Psychology*, 36:32–37.

Wood, J. V. (1996). What is social comparison and how should we study it? *Personality and Social Psychology Bulletin*, 22(5):520–537.

Xu, G. (2018). The costs of patronage: Evidence from the british empire. *American Economic Review*, 108(11):3170–98.

VI Appendix

VI.A Appendix A: Randomization Check

We address potential selection issues that might have surfaced as a result of the manager's decision in the treatment. We first ensure that the employees' responses to the personality questions cannot predict their level of altruism toward the manager. If one or more of these questions *can* predict altruism and if managers make their decisions on the basis of the employees' responses to these questions, then any treatment effect we observed could be driven by pre-existing differences in altruism between the treatment and baseline. In order to ensure this is not the case, we regress the number of work-hours sent to the manager in Task 1 (which is a non-treatment specific measure of altruism) on dummy variables for the responses to the personality questions. From Table 5, it is clear that, taken individually, none of these questions predicts altruism toward the manager.

Next we check that subjects' characteristics (including the way in which they answered the personality questions) are balanced between treatments. After adjusting for multiple comparisons, we do not find any significant difference in any of our covariates for either the low- or high-importance employees, thus confirming that the randomization to different conditions was successful.

TABLE 5: Regressions of work-hours sent in Task 1 on responses to personality questions

Work-hours sent in Task 1	(1)	(2)	(3)	(4)	(5)
lied(q1)	0.050				-0.066
	(1.525)				(1.531)
discussion(q2)		-0.634			-0.592
		(1.558)			(1.571)
travel(q3)			2.289		2.650
			(1.588)		(1.609)
attention(q4)				-2.354	-2.760*
				(1.519)	(1.540)
Constant	22.01***	22.48***	20.052***	22.99***	21.76***
	(0.953)	(1.256)	(1.308)	(0.949)	(1.939)
N	302	302	302	302	302
R^2	0.000	0.001	0.007	0.008	0.018

Notes: Standard errors are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

TABLE 6: Means, Standard Deviations and Tests of Baseline-Treatment Covariate Balance

	Low Importance Employees			High Importance Employees		
	(1)	(2)	(3)	(4)	(5)	(6)
	Baseline	Treatment	Difference (2) - (1)	Baseline	Treatment	Difference (5) - (4)
Altruism (Task 1 choice)	24.824	20.403	-4.422	22.176	20.987	-1.189
	(12.698)	(14.177)	(0.046)	(11.840)	(12.571)	(0.551)
Gender (% male)	0.514	0.481	-0.033	0.514	0.481	-0.033
	(0.503)	(0.503)	(0.688)	(0.503)	(0.503)	(0.688)
Age (years)	24.054	22.870	-1.184	22.581	23.610	1.029
	(2.881)	(2.769)	(0.011)	(2.872)	(3.901)	(0.068)
Major (% Econ/Mgmt)	0.378	0.442	0.063	0.514	0.429	-0.085
	(0.488)	(0.500)	(0.434)	(0.530)	(0.498)	(0.312)
Emp. status (% employed)	0.473	0.403	-0.070	0.446	0.494	0.048
	(0.503)	(0.494)	(0.387)	(0.500)	(0.503)	(0.561)
Nationality (% CZ/SK)	0.878	0.883	0.005	0.905	0.870	-0.035
	(0.329)	(0.323)	(0.929)	(0.295)	(0.338)	(0.496)
Q1 - lied (% yes)	0.459	0.506	0.047	0.378	0.221	-0.158
	(0.502)	(0.503)	(0.566)	(0.488)	(0.417)	(0.034)
Q2 - discussion (% yes)	0.689	0.610	-0.079	0.581	0.714	0.133
	(0.466)	(0.491)	(0.314)	(0.497)	(0.455)	(0.088)
Q3 - travel (% yes)	0.743	0.571	-0.172	0.662	0.740	0.078
	(0.440)	(0.498)	(0.026)	(0.476)	(0.441)	(0.297)
Q4 - attention (% yes)	0.459	0.403	-0.057	0.338	0.364	0.026
	(0.502)	(0.494)	(0.484)	(0.476)	(0.484)	(0.742)
No.of Observations	74	77		74	77	

Notes: The numbers in parentheses in columns 1, 2, 4 and 5 are the standard deviations while the numbers in parentheses in columns 3 and 5 are the unadjusted p-values. Altruism is measured as hours sent to the manager in Task 1. For Nationality, we report the percentage of subjects who were either Czech (CZ) *or* Slovak (SK). After adjusting for multiple comparisons using the sequentially rejective procedure suggested by Holm (1979), we find no imbalance in any of the measured covariates for either the low- or high-importance employees (adjusted $\alpha = 0.005$).

VI.B Appendix B: Tobit Regressions

TABLE 7: Tobit models of work-hours sent by low-importance employees in Task 2

	Dependent variable: work-hours sent in Task 2		
	(1)	(2)	(3)
Treatment	-9.728**	-10.550***	-10.890***
	(3.769)	(3.825)	(3.823)
Work-hours sent in Task 1	0.725***	0.720***	0.726***
	(0.151)	(0.153)	(0.153)
Attention(q4)		-7.468**	-7.876**
		(3.729)	(3.732)
State Self-Esteem			0.325
			(0.413)
Stability of Self-Esteem			0.570
			(0.924)
Control Variables	×	✓	✓
Constant	-3.786***	16.380	3.805
	(4.694)	(21.320)	(24.070)
N	151	151	151
		Left-censored obs: 57; right-censored obs: 14	

Notes: Standard errors in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively. The control variables in Models (2) and (3) include both the demographic controls: gender, age, employment status, nationality and field of study as well as dummy variables that encode responses to the remaining personality questions namely, Lied (q1), Discussion(q2) and Travel(q3). None of these controls were statistically significant.

TABLE 8: Tobit models of work-hours sent by high-importance employees in Task 2

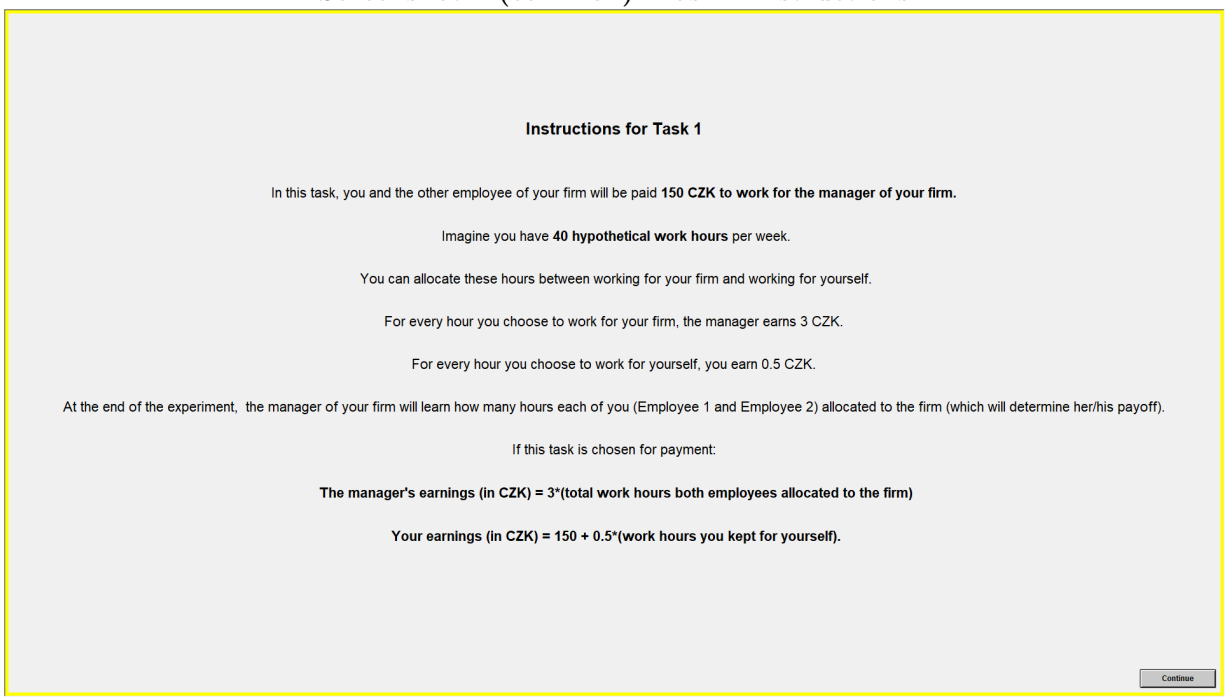
	Dependent variable: work-hours sent in Task 2		
	(1)	(2)	(3)
Treatment	4.722**	4.024*	3.668
	(2.384)	(2.396)	(2.400)
Work-hours sent in Task 1	0.878***	0.890***	0.883***
	(0.106)	(0.108)	(0.109)
Lied(q1)		-5.088*	-5.451
		(2.615)	(2.620)
State Self-Esteem			-0.322
			(0.236)
Stability of Self-Esteem			0.494
			(0.641)
Control Variables	×	✓	✓
Constant	5.327*	2.691	1.690
	(2.857)	(11.750)	(13.700)
N	151	151	151
	Left-censored obs: 14; right-censored obs: 34		

Notes: Standard errors in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively. The control variables in Models (2) and (3) include both the demographic controls: gender, age, employment status, nationality and field of study as well as dummy variables that encode responses to the remaining personality questions namely, Discussion(q2), Travel(q3) and Attention(q4). None of these controls were statistically significant.

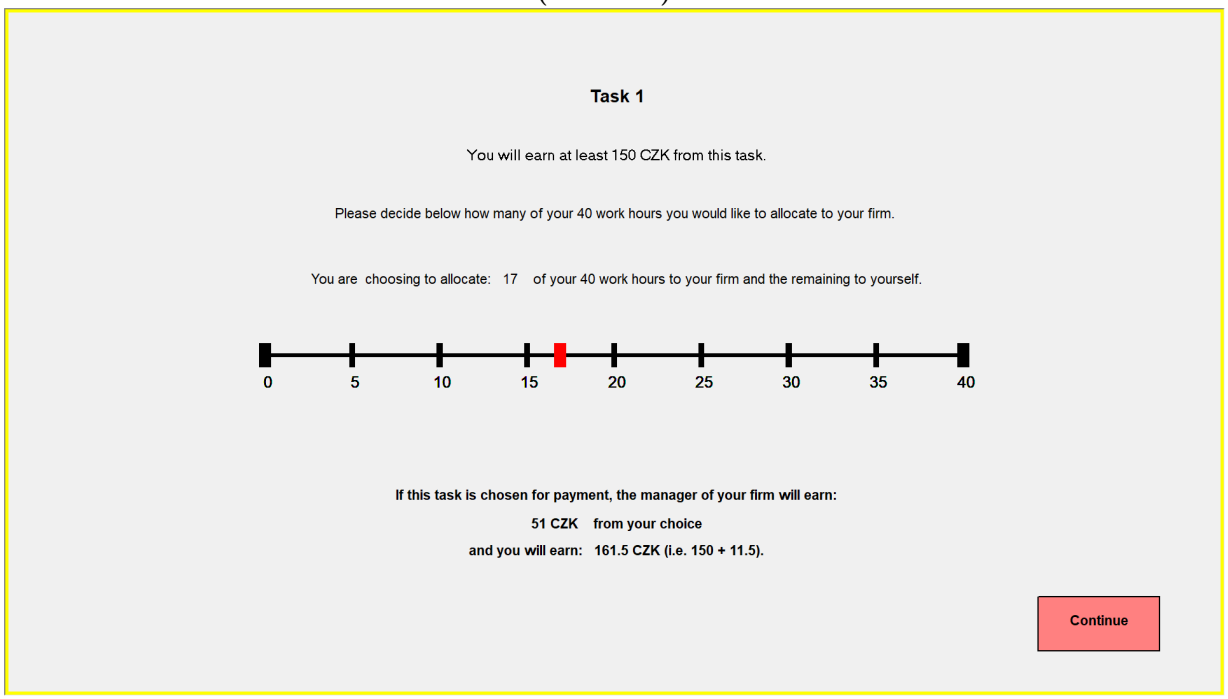
VI.C Appendix C: Screenshots of experimental instructions and decision screen

Participants first selected their sex and then were divided into same sex firms consisting of 1 manager and 2 employees. After receiving their role assignment but before seeing any further instructions, all participants then answered the four personality questions (detailed in Section III.C). The instructions to employees are represented in the screenshots below with the type of instruction ("treatment", "baseline" or "common") specified within brackets.

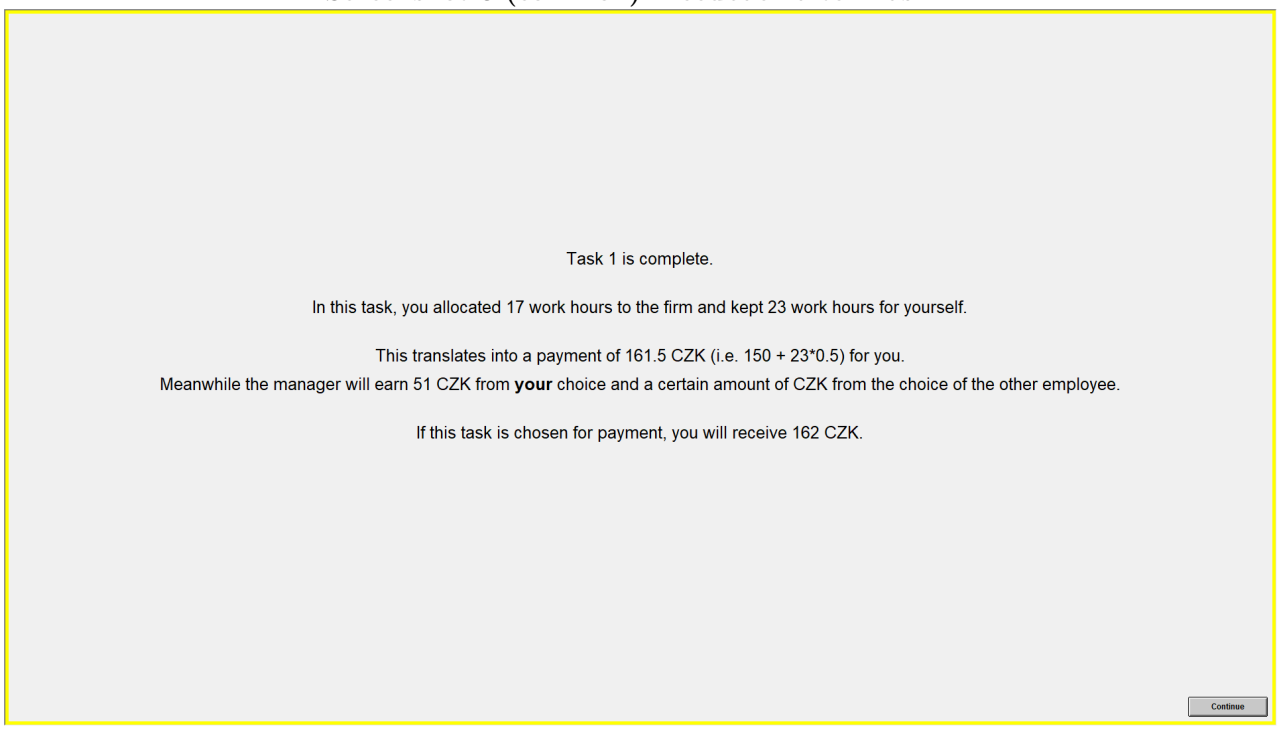
Screenshot 1 (common): Task 1 instructions



Screenshot 2 (common): Task 1 choice

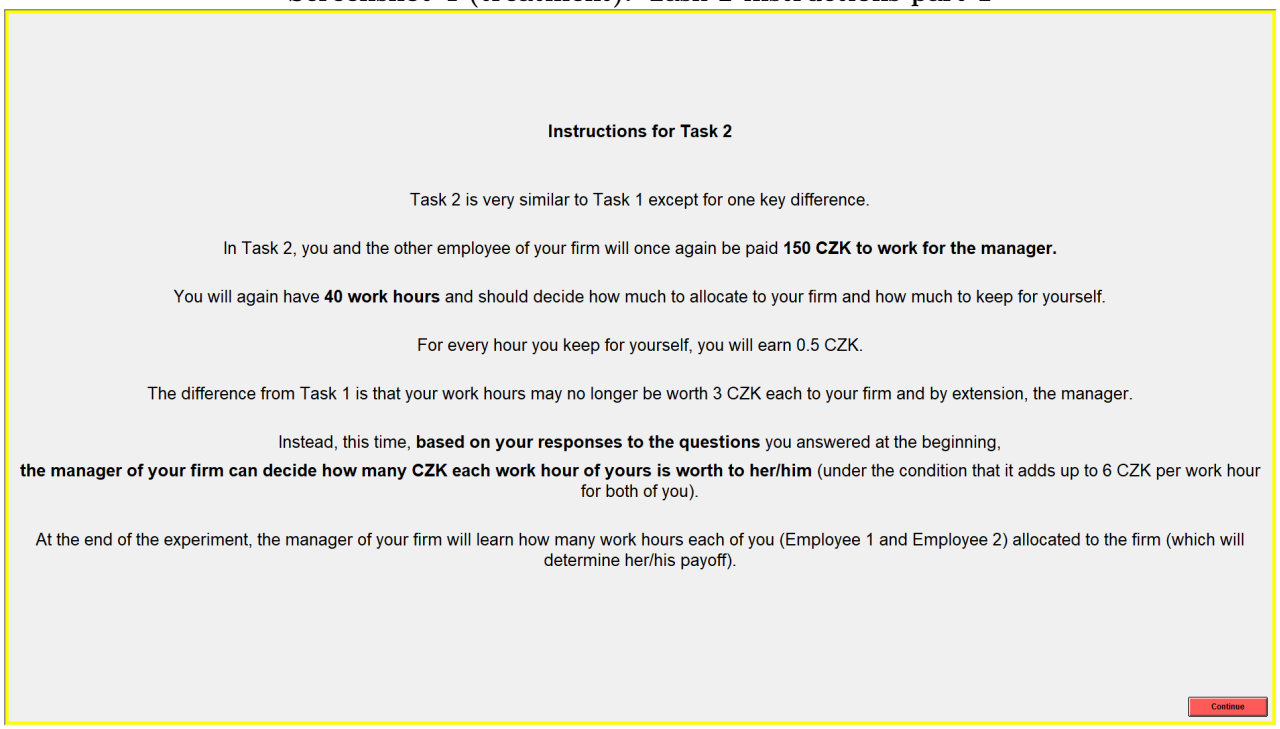


Screenshot 3 (common): Feedback after Task 1

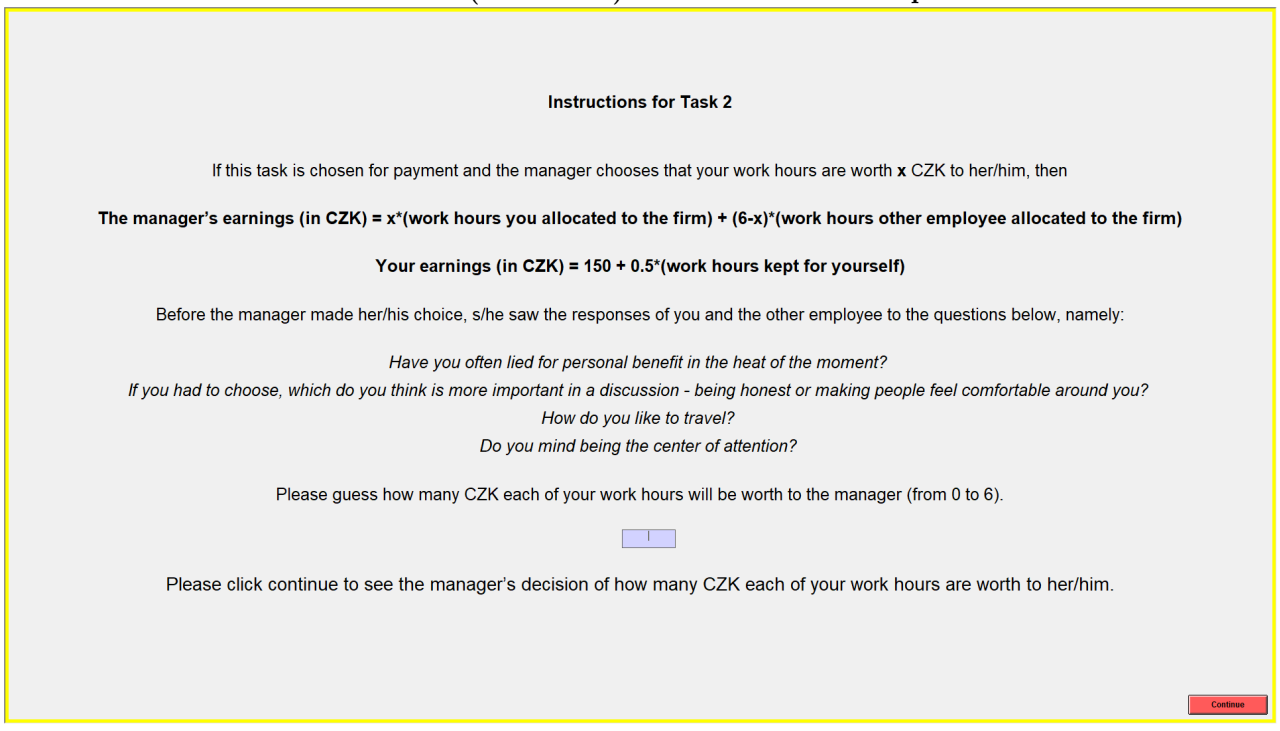


Task 2 Instructions to Employees in the Treatment

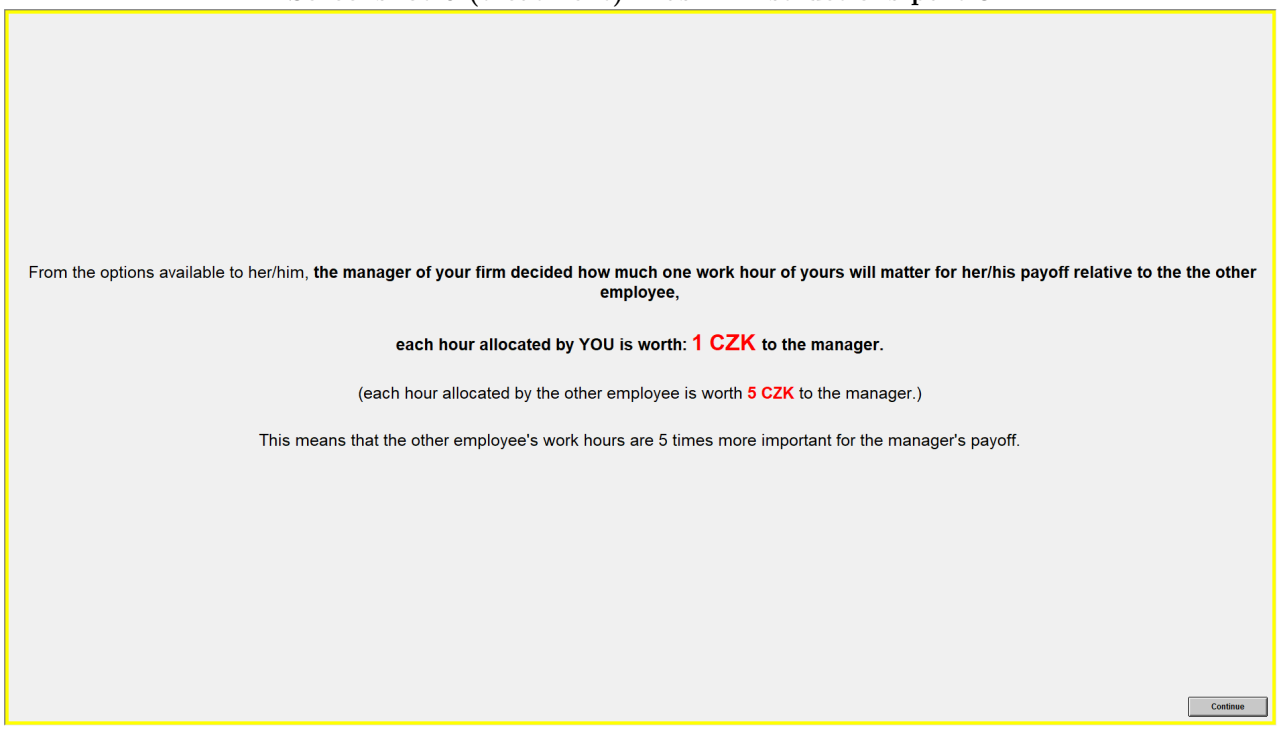
Screenshot 4 (treatment): Task 2 instructions part 1



Screenshot 5 (treatment): Task 2 instructions part 2

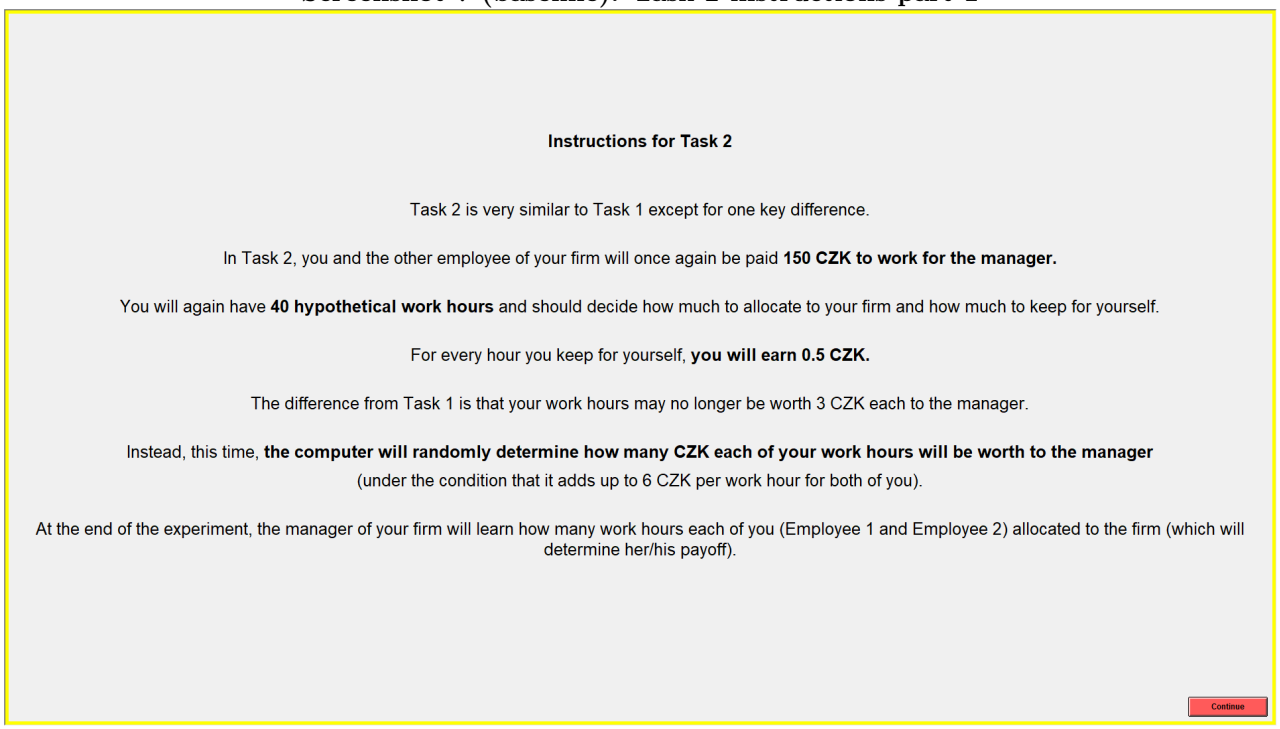


Screenshot 6 (treatment): Task 2 instructions part 3

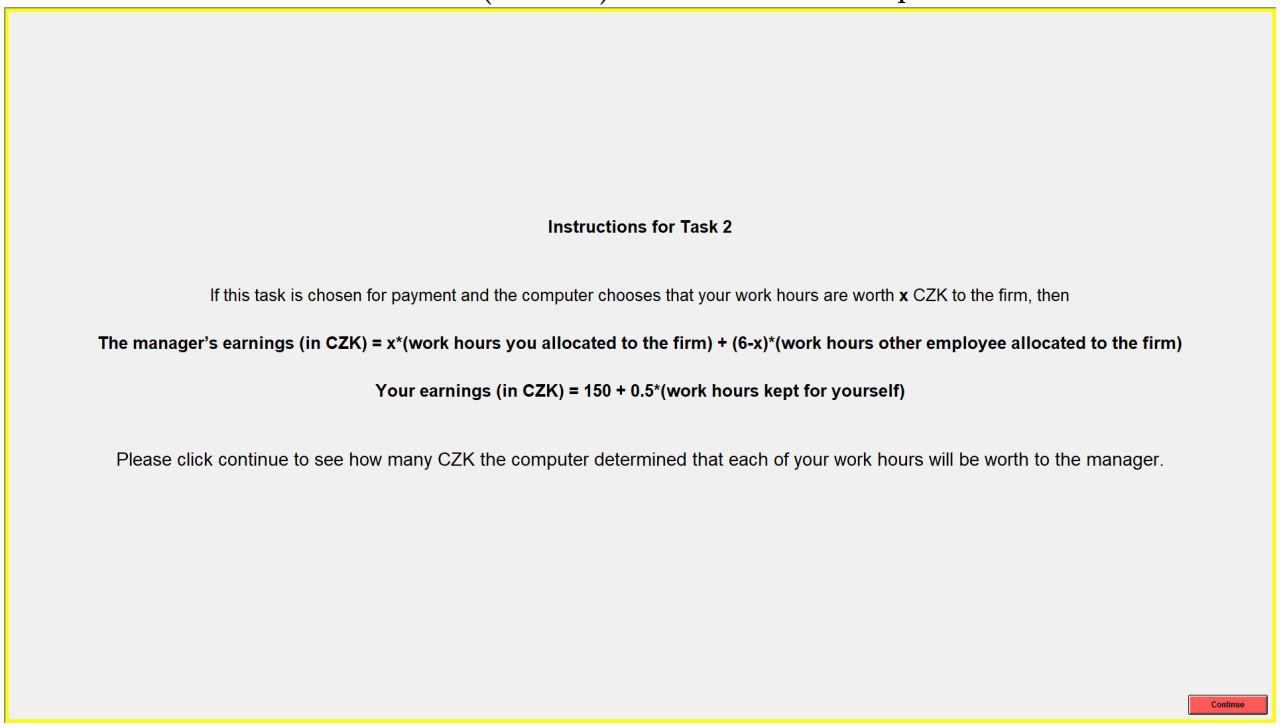


Task 2 Instructions to Employees in the Baseline

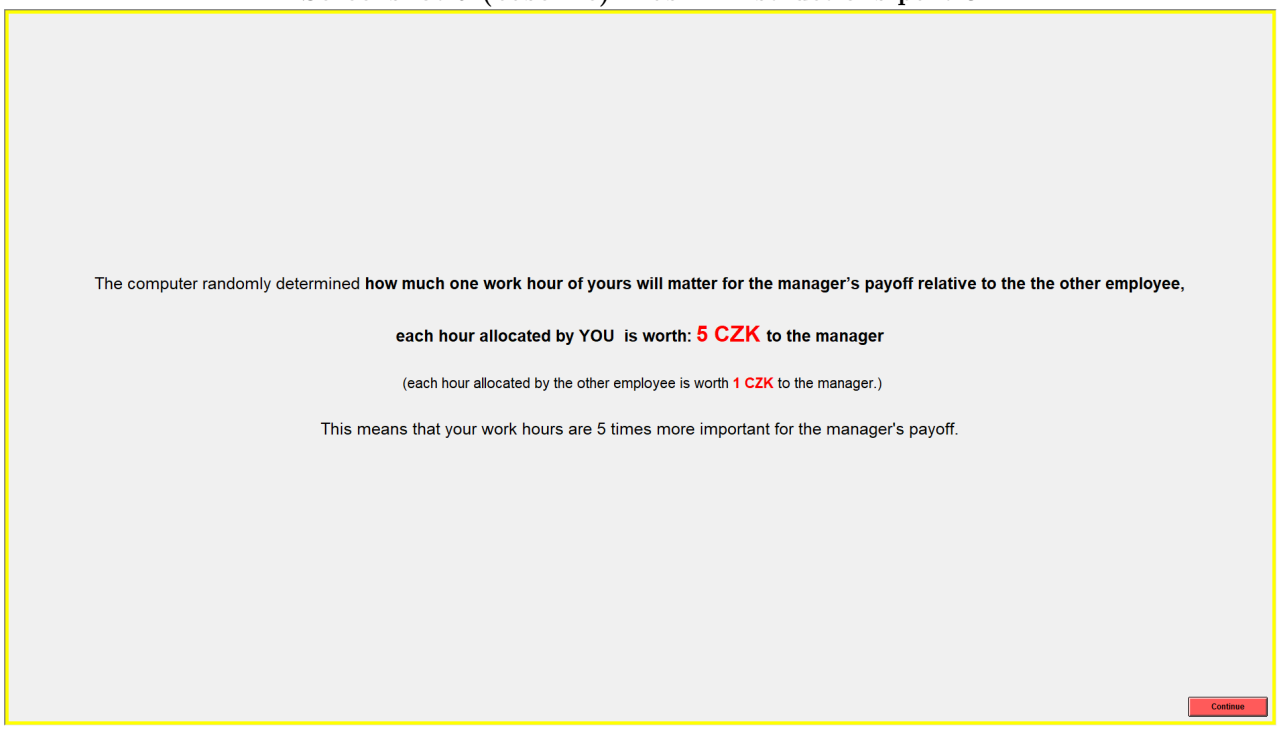
Screenshot 7 (baseline): Task 2 instructions part 1



Screenshot 8 (baseline): Task 2 instructions part 2

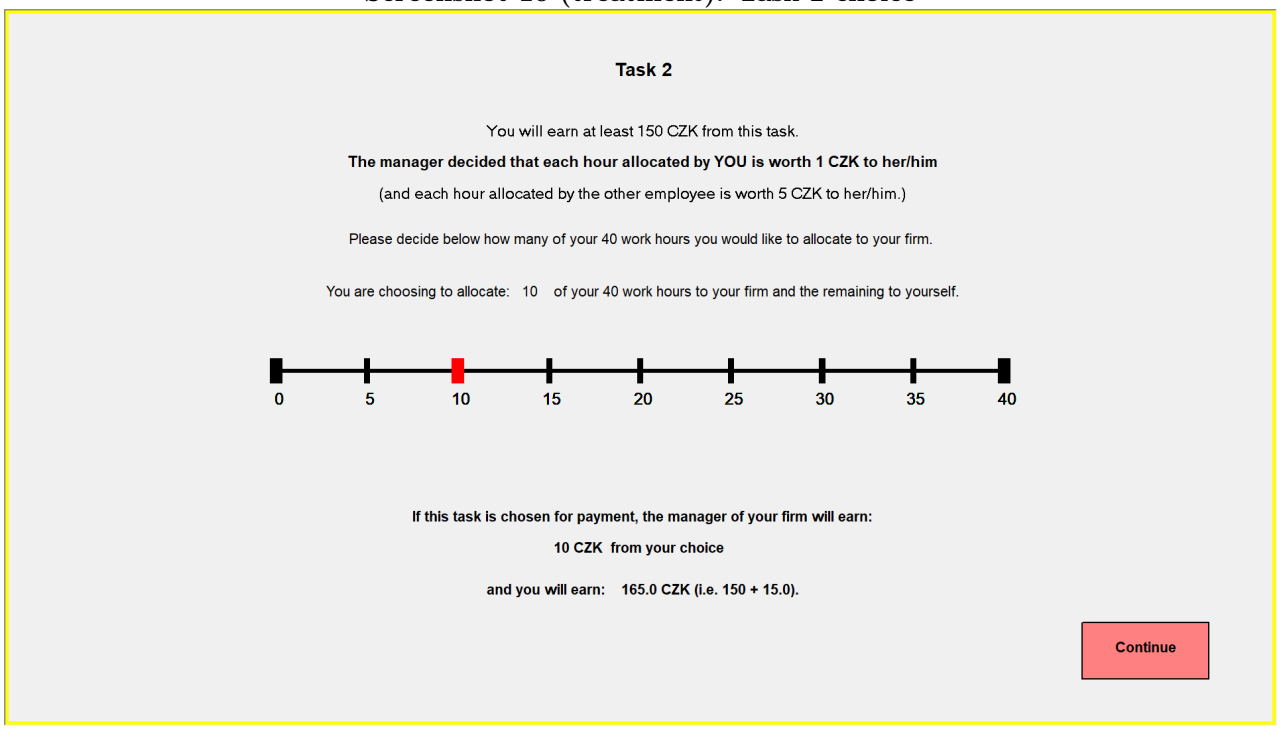


Screenshot 9 (baseline): Task 2 instructions part 3

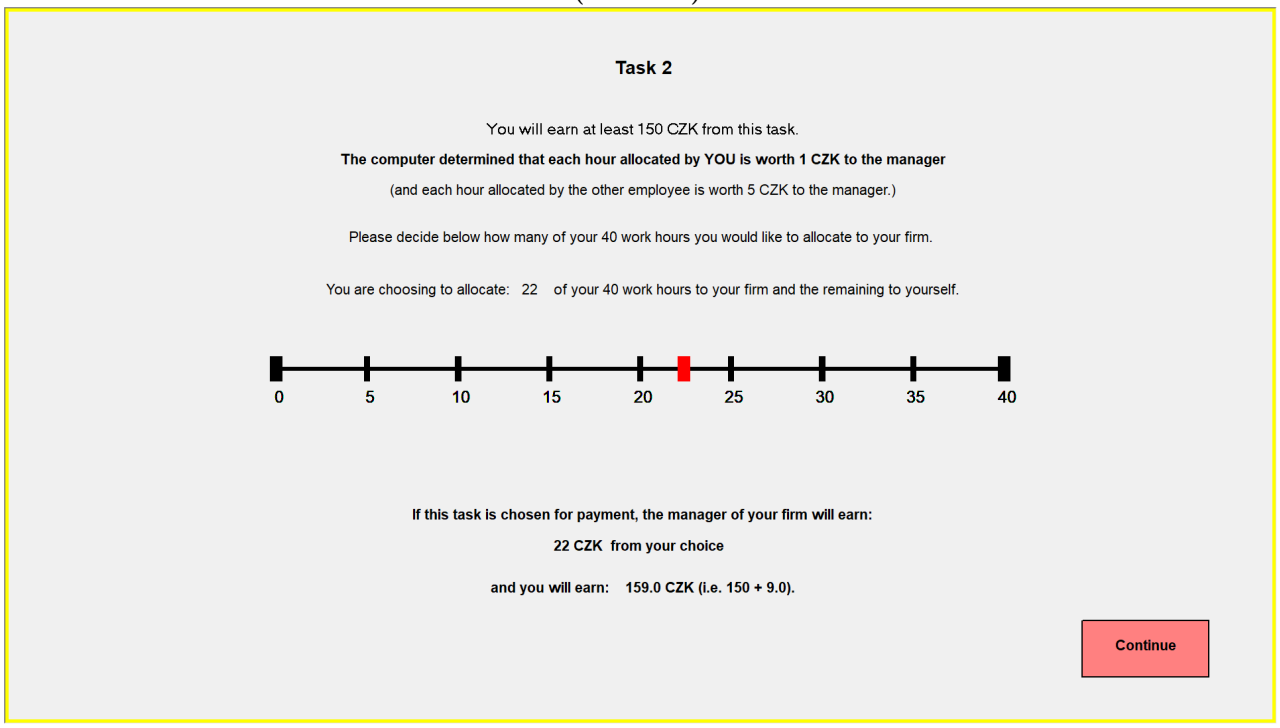


Task 2 Choice in Treatment and Baseline

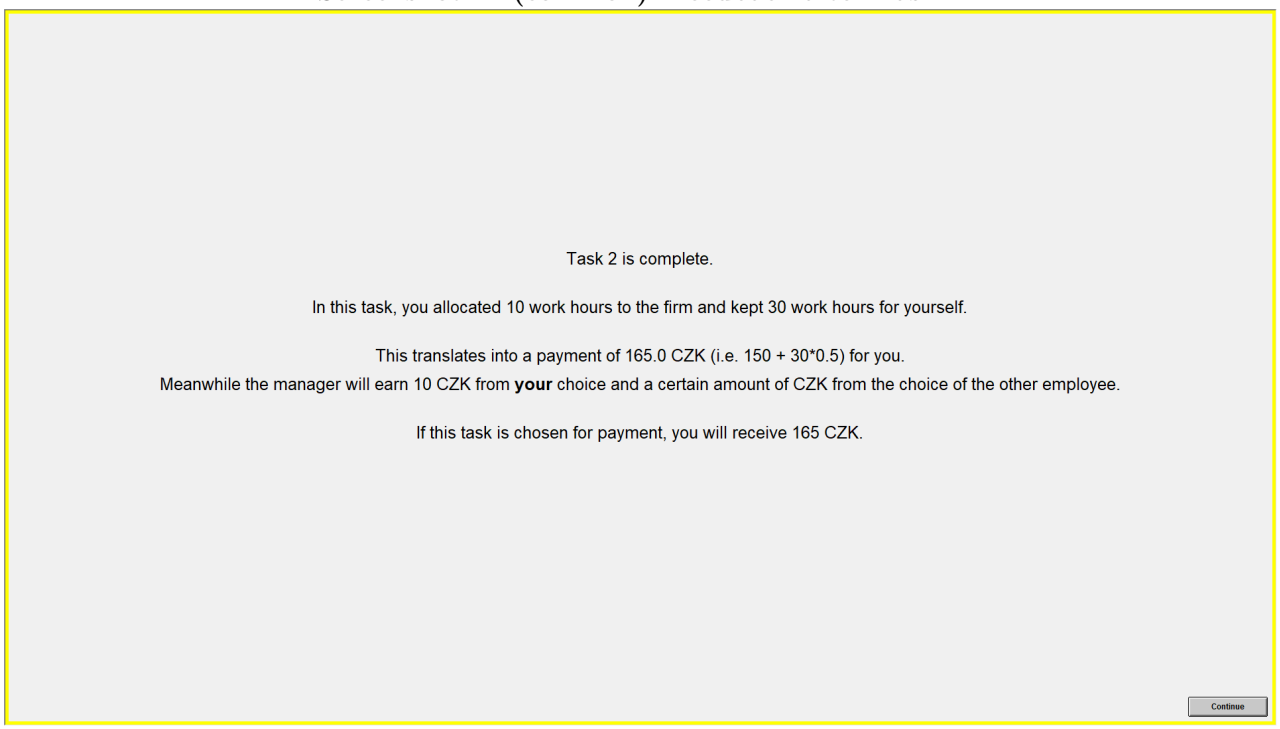
Screenshot 10 (treatment): Task 2 choice



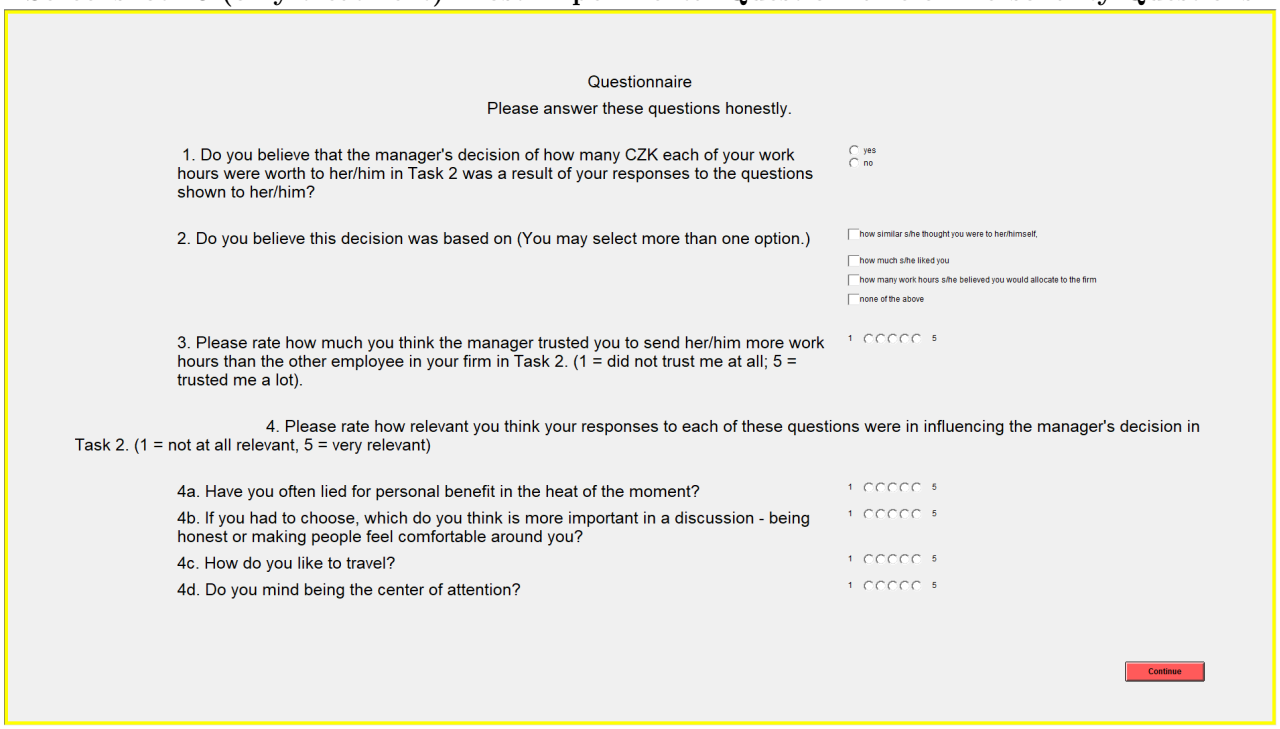
Screenshot 11 (baseline): Task 2 choice



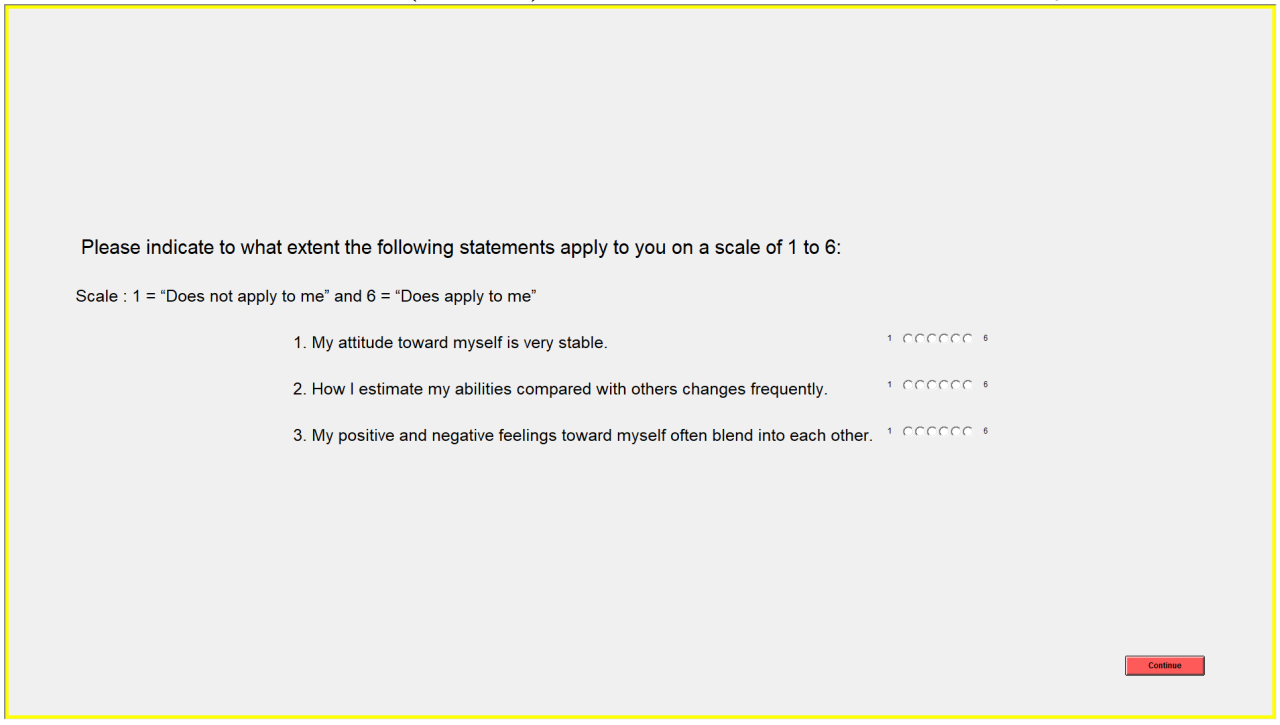
Screenshot 12 (common): Feedback after Task 2



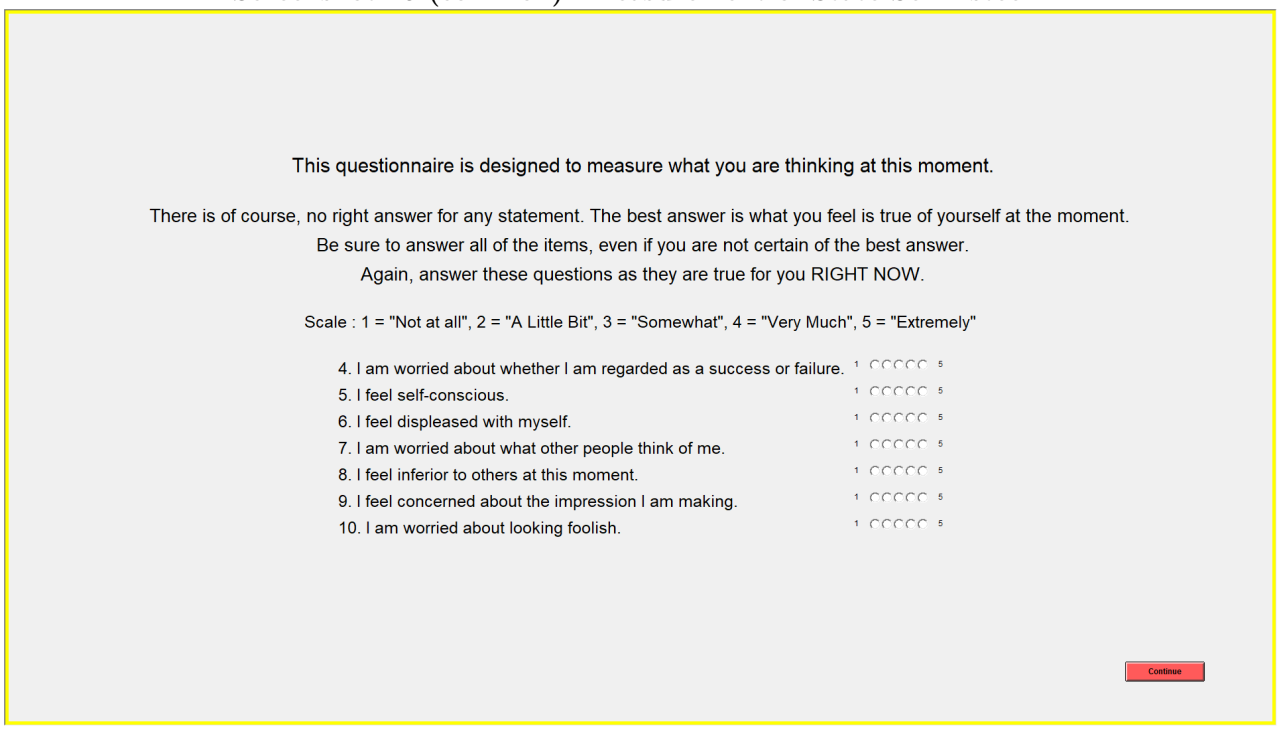
Screenshot 13 (only treatment): Post Experimental Questionnaire on Personality Questions



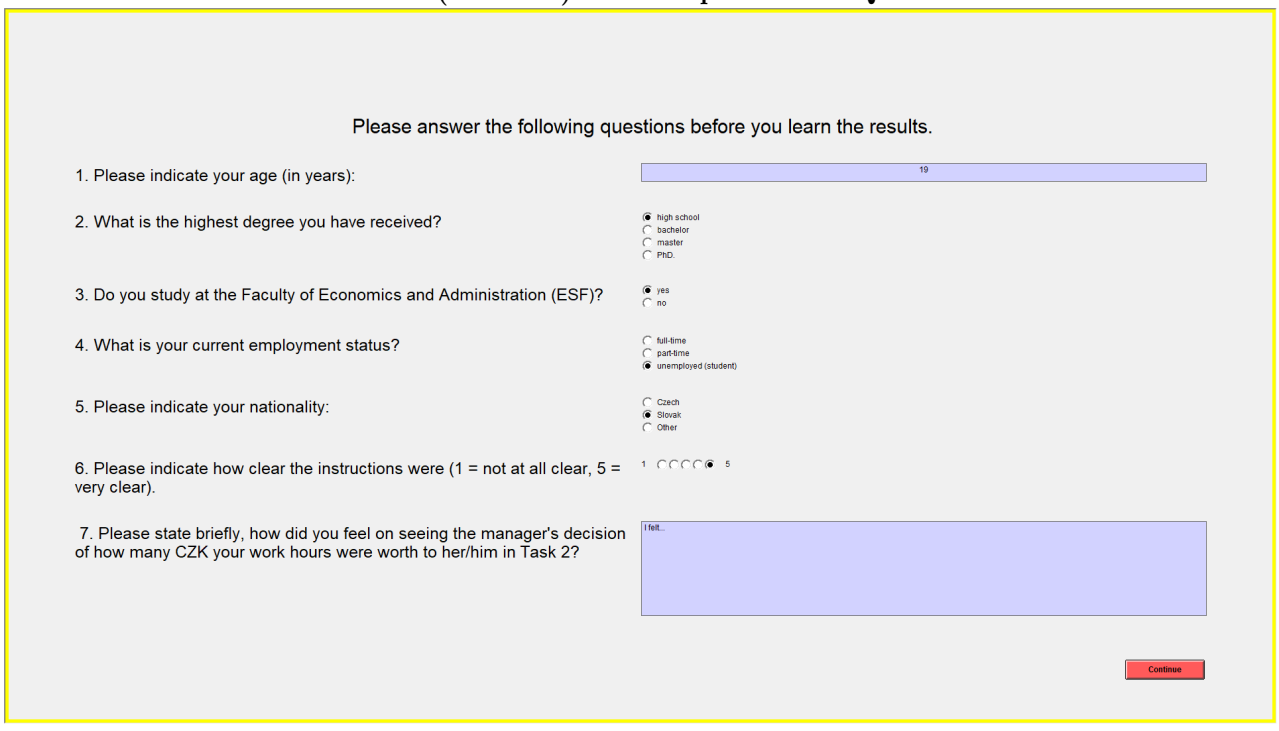
Screenshot 14 (common): Measurement of Self Esteem Stability



Screenshot 15 (common): Measurement of State Self Esteem



Screenshot 16 (common): Post Experimental Questionnaire



Screenshot 17 (baseline): Results